

North Carolina Local Implementation
HL7 2.5.1 Immunization Messaging Guide for
VXU & ACK Transfer Specifications

Version 10.3.1

10/30/2018

This document is the NCIR local Implementation Guide released for the purpose of pilot end-to-end testing. We expect to release the next version of this document once the pilot phase is complete.

Note to reviewer: Please review the entire document and send all your questions related to VXU at one time. This allows NCIR to efficiently address issues during your developer and BA review.

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1. Introduction

In order for different health information systems to exchange data, the structure and content of the data to be exchanged must be standardized. Three controlling documents define how the **NCIR HL7** data exchange interface works. They are arranged in a hierarchy of documents, each refining and constraining the HL7 Standard.

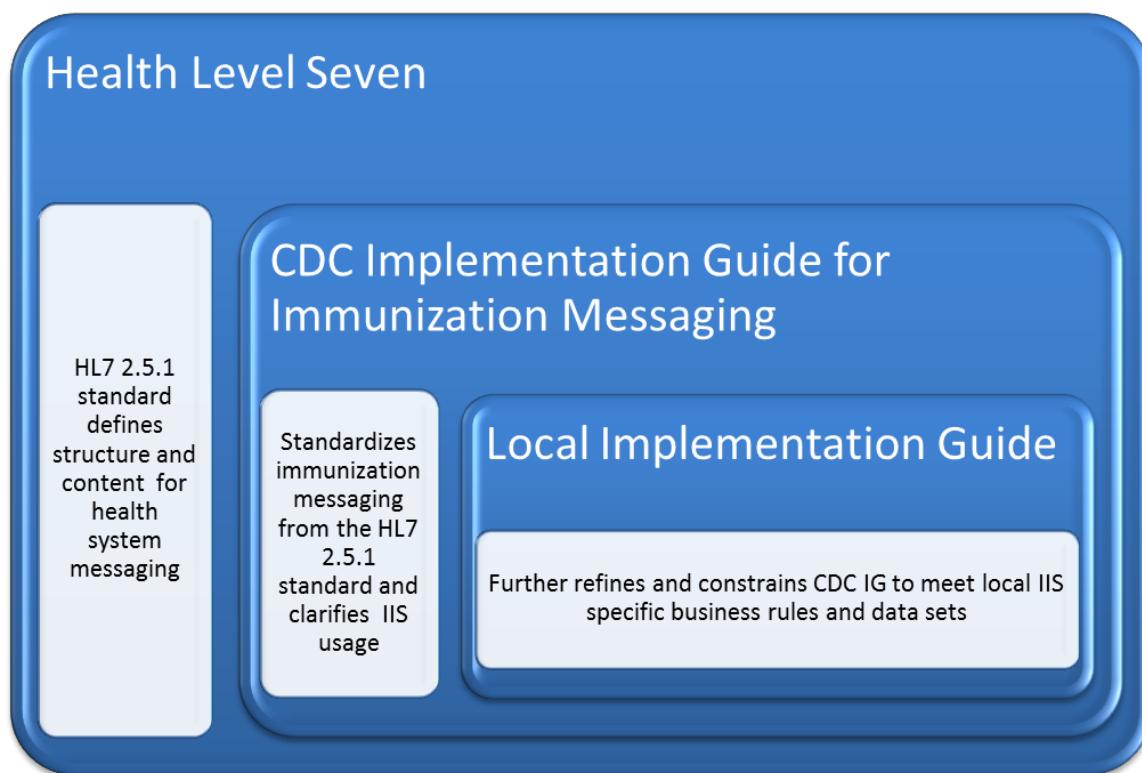


Figure 1: HL7 Controlling Document Hierarchy

The first document is the HL7 2.5.1 standard developed by Health Level Seven, a not-for-profit ANSI-accredited standards developing organization. This standard defines the structure and content of immunization messages, but leaves many specific implementation details undecided. Beneficial information on HL7 and a copy of the HL7 message standard can be obtained from the Health Level Seven website at <http://www.hl7.org>.

The second document is the CDC's **HL7 2.5.1 Implementation Guide for Immunization Messaging, Release 1.5** (CDC IG). This guide gives specific instructions regarding how to report to immunization information systems, but still leaves some implementation decisions to each state IIS. This guide and other technical information can be obtained from the CDC website at <http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>

The third document is this document. It is finalizes all implementation decisions and defines exactly what **NCIR** will and will not accept. It is written in accordance with the standards set in the first two documents. This local implementation guide has taken great care to point out differences from the CDC IG by adding additional columns to the tables. In cases where this guide differs from the CDC IG, this guide will provide both the CDC IG column followed the local usage specification. This effort will prove highly useful in the larger interoperability effort for Electronic Health Record Systems, Indian Health Services, and any other electronic exchange that may span multiple IIS. Providing this information will allow the implementers of external systems to accurately compare the CDC IG with a local implementation guide, and compare differences between two different local implementation guides much easier than in the past.

Intended Audience

This Local IG is intended for technical groups from IIS and EHR-S that must implement these guidelines. The reader of this Local IG should have a solid HL7 foundation and be very familiar with the contents of the CDC IG (<http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>). Chapters 2 and 3 of the CDC IG provide HL7 foundational concepts and set the stage for this Local IG. This document assumes the reader is already familiar with HL7 and is interested in understanding NCIR specific specifications. The goal of this Local IG is to provide an unambiguous specification for creating and interpreting messages for the NCIR.

Scope

This Local IG is intended to facilitate the exchange of immunization records between external Health Systems and **NCIR** and will only contain information related to **Z22-VXU** and its associated response **Z23-ACK** transmission types. Other Transmission Types, such as, QBP, RSP, and ADT will be covered in a separate LIG document. Therefore, all usage, descriptions, rules, and examples in this document will pertain strictly to **Z22-VXU** and **Z23-ACK**. Individual Segment Types will be noted with an “XXX Only” if the Segment type is only used for that particular Transmission Type (Z22-VXU but not Z23-ACK) This document includes following workflows:

- sending and receiving immunization histories for individuals
- sending and receiving demographic information about the individuals
- acknowledging receipt of immunization histories reporting errors in the messaging process
- Sending observations about an immunization event (this may include funding, reactions, forecasts and evaluations).

Organization and Flow

This Local IG is designed to mirror the organization and flow of the CDC IG. This chapter of the guide defines the high-level use cases supported by **NCIR**. The subsequent chapters define how **NCIR** implements those use cases. Finally, this guide has appendices for the code tables and example messages.

It is important to note this guide adheres to the CDC IG on several key aspects including

- Data type specifications from chapter 3 of the CDC IG have not been redefined and usage has not been changed
- Standardized vocabulary is supported as specified in the CDC IG
- To the extent possible, data sets and business rules will adhere to the CDC IG.

In cases where differences exist between this guide and the CDC IG the differences will be clearly defined in the appropriate sections of this guide.

2. Actors, Goals, and Messaging Transactions

Chapter 2 of the CDC IG defines actors (entities) that may be involved in sending or receiving immunization-related messages. It describes what actors are and how use cases (goals) can be associated to those actors. Finally, it associates specific HL7 messages with these use cases.

There are nine use cases defined in Chapter 2 of the CDC IG. The use cases covered in this Local Implementation guide are listed below.

Use Case	Goal	Supported by NCIR
Send Immunization History	To send an immunization history for an individual client from one system to another.	Yes
Receive Immunization History	To receive an unsolicited immunization history. It may be an update or a new record.	Yes
Send Demographic Data	To send demographic data about a person. It may be an update or a new record.	Yes
Accept Demographic Data	To accept demographic data about a person. It may be an update or a new record.	Yes
Acknowledge Receipt	To acknowledge receipt of a message. This can be an immunization history, request for immunization history, demographic update, observation report or request for personal id. It may indicate success or failure. It may include error messages.	Yes
Report Error	To send error messages related to submitted messages. These errors could result of rejection of message or parts of message.	Yes

3. HL7 Messaging Infrastructure

The CDC IG contains basic descriptions of terms and definitions that are used in both the CDC IG and this guide. To avoid potentially ambiguous situations, the majority of the terms and definitions will not be redefined in this guide.

A key attribute to HL7 fields, components, and sub-components is the Usage Code. In the table below are the acceptable Usage Codes used in this implementation guide.

Usage Code	Interpretation	Comment
R	Required	<p>A conforming sending application shall populate all "R" elements with a non-empty value.</p> <p>Conforming receiving application shall process the information conveyed by required elements.</p> <p>A conforming receiving application must not raise an error due to the presence of a required element, but may raise an error due to the absence of a required element.</p>
RE	Required but may be empty	<p>The element may be missing from the message, but it must be sent by the sending application if there is relevant data.</p> <p>A conforming sending application should be capable of providing all "RE" elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values, then that element will be omitted.</p> <p>Receiving applications will be expected to process or ignore data contained in the element, but must be able to successfully process the message if the element is omitted (no error message should be generated because the element is missing).</p>

Usage Code	Interpretation	Comment
C	Conditional	<p>An element with a conditional usage code has an associated condition predicate that determines the operational requirements (usage code) of the element. If the condition predicate associated with the element is true, follow the rules for a which shall be one of "R", "RE", "O" or "X": If the condition predicate associated with the element is false, follow the rules for b which shall be one of "R", "RE", "O", or "X". a and b can be valued the same.</p> <p>Note: When C (O/X), or similar is used, a condition predicate will not be provided.</p>
CE	Conditional but may be empty	<p>This usage has an associated condition predicate. This predicate is an attribute within the message.</p> <p>If the predicate is satisfied:</p> <p>If the conforming sending application knows the required values for the element, then the application must send the element.</p> <p>If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application should be capable of knowing the element (when the predicate is true) for all 'CE' elements.</p> <p>If the element is present, the conformant receiving application shall process or ignore the values of that element. If the element is not present.</p> <p>The conformant receiving application shall not raise an error due to the presence or absence of the element.</p> <p>If the predicate is not satisfied:</p> <p>The conformant sending application shall not populate the element.</p>

Usage Code	Interpretation	Comment
		The conformant receiving application may raise an application error if the element is present.
O	Optional	<p>This element may be present if specified in local profile. Local partners may develop profiles that support use of this element. In the absence of a profile, conformant sending applications will not send the element.</p> <p>Conformant receiving applications will ignore the element if it is sent, unless local profile specifies otherwise. Conformant receiving applications may not raise an error if it receives an unexpected optional element.</p>
X	Not Supported	<p>The element is not supported. Sending applications should not send this element.</p> <p>Receiving applications should ignore this element if present. A receiving application may raise an error if it receives an unsupported element. Any profile based on this Guide should not specify use of an element that is not supported in this Guide.</p>

4. HL7 Data Types

Understanding this document requires knowledge of HL7 data types listed in chapter 4 of CDC IG (<http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>).

Data type definitions and descriptions are not repeated here and the NCLIG highlights the difference in usage of field within respective segments. The NCLIG may tighten usage but will not loosen.

Any differences between NCLIG and the CDC IG will be clearly defined within each Segment table contained within this document. A separate column titled 'NCLIG Usage' was created to highlight any and all HL7 Data Type changes required by the NCIP.

Example:

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCLIG Usage	Constraint
1	1	ST	[1..1]		Batch Field Separator	R	R	The BHS.1 field shall be
2	3	ST	[1..1]		Batch Encoding Characters	R	R	The BHS.2 field shall be ^~\&

5. Segments and Message Details

This chapter will contain specifications for each segment used with a **Z22-VXU** or **Z23-ACK** transmission. It will indicate which fields are supported or required and describe any constraints on these fields. Chapter 6 will address how these building blocks are assembled into specific messages that meet the use cases listed in Chapter 2.

Table 5-1 Message Segments for VXU and/or ACK

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
BHS (Batch Header Segment)	The Batch Header Segment wraps a group of 1 or more messages. These may be a mixture of acceptable message types. This segment is not required for real-time messaging. That is, a stream of messages may be sent without a BHS. A system may choose to require BHS for all groups of messages, but should specify this requirement in	Any	Optional	Optional	NCIR will ignore a BHS segment on inbound messages. NCIR will not send a BHS segment in outbound messages.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
	a local implementation Guide.				
BTS (Batch Trailer Segment)	The BTS segment defines the end of a batch. It is required if the message has a matching BHS.	Any	Required if message starts with BHS.	C (if txn starts with BHS)	NCIR will ignore a BTS segment on inbound messages. NCIR will not send a BTS segment in outbound messages.
ERR (Error Segment)	The error segment reports information about errors in processing the message. The segment may repeat. Each error will have its' own ERR segment.	ACK	Ability to create and process is required for conformant systems.	Required	Used to return information about errors.
FHS (File Header Segment)	The file header segment may be used to group one or more batches of messages. This is a purely optional segment, even if batches are sent. Its' use is not anticipated for use in real-time transactions. Any system that anticipates its use should specify this in a	Any	Optional	Optional	NCIR will ignore a FHS segment on inbound messages. NCIR will not send an FHS segment in outbound messages.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
	local implementation Guide.				
FTS (File Trailer Segment)	The FTS segment defines the end of a file of batches. It is only used when the FHS segment is used.	Any	Required to terminate a file of batches. (Matches FHS)	C (if txn starts with FHS)	NCIR will ignore an FTS segment on inbound messages. NCIR will not send an FTS segment in outbound messages.
MSA (Message Acknowledgement Segment)	This segment is included in the query response (RSP) and acknowledgment (ACK) messages. It contains information used to identify the receiver's acknowledgement response to an identified	ACK	Ability to create and process is required for conformant systems.	Required	
MSH (Message Segment Header)	The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.	All	Ability to create and process is required for conformant systems.	Required	This begins every message and includes information about the type of message, how to process it, and by whom it was created.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
NK1 (Next of Kin Segment)	The NK1 segment contains information about the patient's next of kin or other related parties. Any associated parties may be identified.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to carry information about the next of kin for a client. Also carries the client's address/contact information when relationship 'self' is used.
OBX (Observation Result Segment)	The observation results segment has many uses. It carries observations about the object of its parent segment. In the VXU/RSP it is associated with the RXA or immunization record. The basic format is a question and an answer.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to report one atomic part of an observation.
ORC (Order Request Segment)	The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). While not all immunizations recorded in	VXU	Ability to create and process is required for conformant systems.	Required (Each order group must have one ORC segment)	Used to give information about a group of one or more orders (typically RXA).

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
	an immunization message can be associated with an order, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.				
PD1 (Patient Demographic Segment)	The patient additional demographic segment contains demographic information that is likely to change about the patient. In immunization messages, this is information about the need to protect the client's information, how they should be part of reminder efforts and their current status in the IIS.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to give information about a patient. A primary use in immunization messages is to give information about privacy and whether contact is allowed.
PID (Patient Identifier Segment)	This segment contains permanent patient identifying and demographic information that, for the most part, is	VXU	Ability to create and process is required for conformant systems.	Required	Used to carry information about the patient/client.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCLIG Usage	Note
	not likely to change. Used by all applications as the primary means of communicating patient identification information frequently.				
RXA	Pharmacy/Treatment Administration Segment	VXU	Ability to create and process is required for conformant systems.	Required (Each order group must have one RXA segment)	
RXR	Pharmacy/Treatment Route Segment	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	

BHS—Batch Header Segment

NCIR will ignore a BHS segment on inbound messages. NCIR will not send a BHS segment in outbound messages.

BTS—Batch Trailer Segment

NCIR will ignore a BTS segment on inbound messages. NCIR will not send a BTS segment in outbound messages.

ERR—Error Segment (Z23-ACK Only)

Note to providers and EHR vendors: Providers need a method to capture and display the acknowledgement (ACK messages) returned from the NCIR (in response to VXU messages). Some EHR's make this available in real time and ask user to review before closing the chart for the patient. Doing so is also a best practice and avoids inventory accountability errors and other errors needing work later. The acknowledgement also serves as for proof of Meaningful Use submission.

Discuss with your vendor early in the process of interface development about options to handle acknowledgement processing. At the minimum, providers would need a way to check errors/warnings once a day if real time capture and display is not an option.

Three types of acknowledgements are returned from the NCIR. They are

- ***Acknowledgement to indicate that the message processing was “Successful”. No further action is needed for this.***
- ***Acknowledgement to indicate transaction was rejected because of an “Error”. Some examples of this are a required field like First Name is missing or birth date is invalid or HL7 message construction was incorrect (like say MSH segment was missing). Acknowledgements that contain “Errors” usually require an IT fix by your EHR vendor and need action from EHR vendor. The “Error” type acknowledgement should be rare in production.***
- ***Acknowledgement to indicate that the transaction was partially processed because of a “Warning”. The warnings are usually user errors but sometimes may need EHR vendor involvement to fix. The warnings usually need to be reviewed by user (in real time or at least once a day)_to avoid inventory mismatches or data errors. An example of warning would be “No match found for lot number”(user error) or invalid CVX code causing a dose to be not processed (EHR vendor fix may be needed).***

Table 5-2 Error Segment (ERR)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1		ELD	[0..0]		Error Code and Location	X	X	Not supported for Version 2.5 and above.
2	18	ERL	[0..1] ¹		Error Location	RE	RE	If an error involves the entire message (e.g. the message is not parse-able.) then location has no meaning. In this case, the field is left empty.
3		CWE	[1..1]	0357	HL7 Error Code	R	R	
4	2	ID	[1..1]	0516	Severity	R	R	
5		CWE	[0..1]	0533	Application Error Code	RE	RE	
6	80	ST	[0..1]		Application Error Parameter	O	X	
7	2048	TX	[0..1]		Diagnostic Information	O	X	
8	250	TX	[0..1]		User Message	RE	RE	This field may contain free text that may be displayed to a user. It is not intended for any further processing.
9	20	IS	[0..1]	0517	Inform Person Indicator	O	X	
10		CWE	[0..1]	0518	Override Type	O	X	
11		CWE	[0..1]	0519	Override Reason Code	O	X	
12		XTN	[0..1]		Help Desk Contact Point	O	X	

Examples:

Warning message: ERR||PD1^1^16^^0^0|102^Data type error^HL70357^^|W|||PD1-16: Defaulted to A.||||

Error Message: ERR||PID^1^7^2^0|102^Data type error^HL70357^^|E|||PID-7: Date of birth invalid or missing.||||

Application Error: ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533|||OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.||||||

ERR Field Definitions

ERR-2 Error Location

Definition: Identifies the location in a message related to the identified error, warning or message. Each error will have an ERR, so no repeats are allowed on this field (e.g. OBX^10^5^^1^0). This field may be left empty if location is not meaningful. For example, if the message or segment is unable to be parsed, an ERR to that effect may be returned.

NOTE: For application level errors (ERR-3 is 207), ERR-2 (field location) is not populated.

ERR||PD1^1^16^^

Error Location is ERL Data type and above example states that the error is in the PD1 segment, first segment occurrence within the message and in the sixteenth field of the segment.

ERR-3 HL7 Error Code

Definition: Identifies the HL7 (communications) error code. Refer to HL7 Table 0357 – Message Error Condition Codes for valid values. When transaction accepted without error or warning, this field value will be zero. If transaction rejected or has warning, the status code will be populated with a value other than 0 per HL7 table 0357.

ERR||PD1^1^16^^0^0|102^Data type error^HL70357^^|

ERR|||207^Application Internal Error^HL70357^^|

¹ This Guide does not support repeat of this field. It assumes that each error will be contained in one ERR segment. If the same error occurs more than once, there will be one ERR for each.

ERR-4 Severity

Definition: Identifies the severity of an application error. Knowing if something is Error, Warning or Information is intrinsic to how an application handles the content. Valid values are: W - warning, I - information, E – error

ERR||PD1^1^16^^0^0|102^Data type error^HL70357^^|W|

ERR-5 Application Error Code

Definition: Application specific code identifying the specific error that occurred. Refer to User-Defined Table 0533. For application specific error, ERR-3 will be 207 and this field (ERR-5) will be populated based on a value from User Defined table 0533.

NOTE: ERR-5 is populated only for application level errors (i.e. when ERR-3 = 207) and not for HL7 level errors (values other than 207 in ERR-3).

ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533|

ERR-8 User Message

Definition: The text message to be displayed to the application user.

ERR||PID^1^7^2^0|102^Data type error^HL70357^^|E||||**PID-7: Date of birth invalid or missing.** ||||

ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533|||**OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.**

FHS—Field Header Segment

NCIR will ignore an FHS segment on inbound messages. NCIR will not send the FHS segment in outbound messages.

FTS—File Trailer Segment

NCIR will ignore an FTS segment on inbound messages. NCIR will not send the FTS segment in outbound messages.

MSA—Message Acknowledgement Segment (Z23-ACK Only)

Table 5-3 Message Acknowledgement Segment (MSA)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	ID	[1..1]	0008	Acknowledgment Code	R	R	
2	20	ST	[1..1]		Message Control ID	R	R	
3	80	ST	[0..1]		Text Message	X	X	
4	15	NM	[0..1]		Expected Sequence Number	O	X	
5			[0..1]		Delayed Acknowledgment Type	O	X	
6		CE	[0..0]	0357	Error Condition	X	X	

MSA Field Definitions

MSA-1 Acknowledgment Code

Definition: This is a required field. Acknowledgement code is given to receiver's response to a message. AA (Application Accept) means the message was processed normally. AR (Application Rejected) indicates message was rejected. AE (Application Error) means an error prevented normal processing –warning messages are sent. The optional ERR segment will be included when MSA-1 is an AR or AE.

Example 1:
MSA|AA|1

Example 2:

MSA|AR|1
ERR||MSH^1^1^^|101^Required field missing^HL70357^^|E|||MSH-2: Encoding Characters missing or invalid.||||||

Example 3:
MSA|AE|1
ERR||PD1^1^16^^0^0|102^Data type error^HL70357^^|W|||PD1-16: Defaulted to A.|

MSA-2 Message Control ID

Definition: This is a required field. This field contains the message control ID from MSH-10 from the message being acknowledged. This allows the sending system to associate this response with the message being responded to.

Example 1: MSA|AA|1||||

MSH—Message Header Segment

Table 5-4 Message Header Segment (MSH)

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NC/R Usage	Constraint
1	1	ST	[1..1]		Field Separator	R	R	The MSH.1 field shall be
2	4	ST	[1..1]		Encoding Characters	R	R	The MSH.2 field shall be ^~\&
3		HD	[0..1]	0361	Sending Application	RE	RE	No constraint
4		HD	[0..1]	0362	Sending Facility	RE	R	
5		HD	[0..1]	0361	Receiving Application	RE	RE	No constraint
6		HD	[0..1]	0362	Receiving Facility	RE	RE	
7		TS_Z	[1..1]		Date/Time Of Message	R	R	The degree of precision must be at least to the second, and the time zone must be included. Subsecond values option. (format YYYYMMDDHHMMSS[.S[S[S]]]+/-ZZZZ).

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NC/R Usage	Constraint
8	40	ST	[0..1]		Security	O	X	
9	15	MSG	[1..1]		Message Type	R	R	
10	20	ST	[1..1]		Message Control ID	R	R	
11	3	PT	[1..1]	0103	Processing ID	R	R	
12		VID	[1..1]	0104	Version ID	R	R	2.5.1
13	15	NM	[0..1]		Sequence Number	O	X	
14	180	ST	[0..1]		Continuation Pointer	O	X	
15	2	ID	[1..1]	0155	Accept Acknowledgement Type	R	R	The value of MSH-15 shall be "ER"
16	2	ID	[1..1]	0155	Application Acknowledgment Type	R	R	The value of MSH-16 shall be "AL"
17	3	ID	[0..1]	0399	Country Code	O	X	Use 3 character country code from ISO 3166. If is empty, assume USA
18	16	ID	[0..1]	0211	Character Set	O	X	blank defaults to ASCII printable
19		CE	[0..1]		Principle Language Of Message	O	X	blank
20	20	ID	[0..1]	0356	Alternate Character Set Handling Scheme	O	X	blank
21		EI	[1..*]		Message Profile Identifier	R	R	One occurrence of MSH-21(Message Profile Identifier) SHALL contain the constant value "Z22^CDCPHINVS"

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
22		XON	[0..1]		Sending Responsible Organization	RE	RE	The initiator of the message
23		XON	[0..1]		Receiving Responsible Organization	RE	RE	The final recipient of the message

Example:

MSH|^~\&|NCIR-SHORT-ORG|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P|2.5.1|||ER|AL||||Z22^CDCPHINVS|NCIR-SHORT-ORG|NCIR

MSH Field Definitions

MSH-1 Field Separator

Definition: This is a required field. It determines the field separator in effect for the rest of this message. NCIR requires the HL7 field separator of “|”.

Inbound –

Error message sent if field is missing or invalid: “Transaction is invalid. Field Separator missing or invalid.”

Outbound –

NCIR sends out the HL7 field separator of “|”.

MSH-2 Encoding Characters

Definition: This is a required field. This field determines the component separator, repetition separator, escape character, and sub-component separator in effect for the rest of this message. NCIR requires the HL7 values of ^~\&.

MSH|^~\&|

Inbound –

Error message sent if field is missing or invalid (values other than the ones specified above): “MSH-2: Encoding Characters missing or invalid.”

Outbound –

NCIR sends out the HL7 values of ^~\&.

MSH-3 Sending Application

Definition: Name of the sending application. NCIR will use “NCIR”. This field is an optional convenience.

MSH|^~\&|NCIR|

Inbound –

Name of the sending application.

Outbound –

When sending, NCIR will use “NCIR” followed by the current version number of the registry.

MSH|^~\&|NCIR9.8.0|

MSH-4 Sending Facility

Definition: This is a required field. This field identifies for whom the message is being sent (the owner of the message information).

MSH|^~\&|NCIR|NCIR-SHORT-ORG|

Inbound –

Contact NCIR staff for value of MSH-4 and will be provided as part of onboarding process. This must be the owning organization.

1. If the field is blank, send an error message and reject the message: “MSH-4: Sending Facility missing.”
2. MSH-4 is the owning organization. For web services, NCIR staff will provide the Sending Facility (MSH-4) value during onboarding process. For Batch, the Sending Facility is the organization user is logged in to submit the batch job.
3. Use the NCIR short name of the organization (e.g., NCIR-SHORT-ORG). NCIR will provide the NCIR short name at the time of onboarding.
4. MSH-4 (owning organization) value generally matches the sending organization in FHS-4/BHS-4. When the Provider Organization owning the information is different than the organization transmitting the message, an error message is shown:
ERR||MSH^3^4^^0^0|102^Data type error^HL70357^^|E|||FHS-4 does not match MSH-4||| or ERR||MSH^3^4^^0^0|102^Data type error^HL70357^^|E|||BHS-4 does not match MSH-4|||.
5. Hub (Vendor/Client or Parent/Child) setup: An organization defined as a Vendor (or parent) can be set to make a single connection to NCIR, where all the client (or child) organizations can submit files using this connection. In this scenario, the client (or child) organization's organization id and short name must be used in MSH-4. A vendor organization may not submit data for any organization that is not defined as a client (or child) to their organization. NC HIE may submit data for any organization.

Outbound –

When sending, NCIR will use “NCIR”.

MSH-5 Receiving Application

Definition: This field is optional.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will populate this field with the Receiving Application Short Organization Name when sending a message.

MSH-6 Receiving Facility

Definition: Identifies the message receiver.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|

Inbound –

When sending data to NCIR, use "NCIR." If value other than "NCIR", the message is rejected with the error: "MSH-6: Message not intended for NCIR."

Outbound –

NCIR will send out the owning organization.

When sending, NCIR will use the short Provider Organization name assigned when the provider first registers with the NCIR database and NCIR-Web interface.

MSH-7 Date/Time Of Message

Definition: This is a required field. Date and time (with seconds + time zone) the message was created. See the TS_Z data type.
(YYYYMMDDHHMMSS[.S[S[S[S]]]]+/-ZZZZ)

Inbound –

A warning will be returned if MSH-7 is an invalid date or the date is missing: “MSH-7: Date/Time required or invalid.”

Warning will be returned if date is a future date: “MSH-7 Date/Time of Message is a future date.”

Outbound –

Date the message was created (YYYYMMDDHHMMSS+/-ZZZZ)

MSH-8 Security

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field

MSH-9 Message Type

Definition: This is a required field. Within HL7, the triggering event is considered to be the real-world circumstance causing the message to be sent.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|

Inbound –

Values accepted for VXU message: **VXU^V04^VXU_V04**.

If field is missing or invalid (values other than the ones specified above), reject the message and send an error message: “MSH-9: Required field. Please enter valid values.

Outbound –

Values sent out for VXU: **VXU^V04^VXU_V04**

MSH-10 Message Control ID

Definition: This is a required field. The message control ID is a string (which may be a number) uniquely identifying the message among all those ever sent by the sending system. It is assigned by the sending system and echoed back in the Z23-ACK message sent in response in MSA-2.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|

Inbound –

If field is empty, the message will be rejected and an error message will be sent: “MSH-10: Message Control-id missing.”

Outbound –

For NCIR the string is the date and time of the transaction and the order of the message in a batch (last 2 digits)- Ex: the following message was sent on 07/03/2012 at 16:41:30 and it was the first message in the batch: 2012070316413000

MSH|^~\&|NCIR9.8.0^^|NCIR^^||110038^^|20130225174751.398-0500||VXU^V04^VXU_V04|**2013022517475101**|

MSH-11 Processing ID

Definition: This is a required field. The processing ID to be used by NCIR is P for production processing. NCIR will always send out a value of “P” in this field.

```
MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P^|
```

Inbound –

For incoming messages, the value in this field must always be “P”. If not “P” or if the field is blank, the transaction will be rejected and an error message returned: “MSH-11: Processing Id missing or invalid.”

Outbound –

NCIR will always send out a value of “P” in this field.

MSH-12 Version ID

Definition: This is a required field. For example, use a value of “2.5.1” to indicate HL7 Version.

```
MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P^|2.5.1|
```

Inbound –

NCIR will accept the value “2.5.1”. If there is no version number found in the MSH segment, the file will not be processed. The error message: “File Rejected. MSH-12: Version Id missing.” will be returned. If MSH-12 is valued but not 2.5.1, an Error message will be sent: “MSH-12: The HL7 Version specified in field 12 of the MSH segment in this HL7 file is not supported for this organization.”

If the case of mixed HL7 transactions, the file will be rejected and error message sent: “FILE REJECTED - MIXED HL7 VERSIONS. HL7 VERSION 2.5.1 REQUIRED.”

Outbound –

Providers submitting information to NCIR must communicate by HL7 2.5.1 only. For these providers, NCIR will also return files in version 2.5.1, indicated in MSH-12. Providers not submitting information to NCIR may request to download client updates by HL7 version 2.5.1, or 2.4.

MSH-13 Sequence Number

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-14 Continuation Number

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-15 Accept Acknowledgment Type

Definition: This field controls whether an acknowledgement is generated for the message sent. Send ER in this field.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P^|2.5.1||ER|

Inbound –

If the field is empty, NCIR will default to ER. If a value other than ER is sent, a warning message will be provided: "MSH-15 Accept Acknowledgement Type [insert sent value] is not valid. Defaulted to ER.". If MSH-15 value is blank, a warning message will be provided: "MSH-15 Accept Acknowledgement Type value ER is required.".

Outbound –

NCIR will send NE in this field in the Z23-ACK.

NCIR will send ER in this field in the Z22-VXU Outbound Organization Extract.

MSH-16 Application Acknowledgment Type

Definition: This field contains the conditions under which application acknowledgements are required to be returned in response to a message.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|20131025114021RM00||2.5.1||ER|AL

Inbound –

Constrained to AL (Always). If field is empty, NCIR will default to AL. If value other than AL, a warning message will be sent: "MSH-16 Application Acknowledgement Type [insert sent value] is not valid. Defaulted to AL.". If MSH-16 is blank, a warning message will be provided: "MSH-16 Application Acknowledgement Type value AL is required".

Outbound –

NCIR will send NE in this field in the Z23-ACK.

NCIR will send AL in this field in the Z22-VXU Outbound Organization Extract.

MSH-17 Country Code (ID) 00017

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-18 Character Set

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-19 Principle Language of Message

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-20 Alternate Character Set Handling Scheme

Definition: This field is not used. NCIR does not populate this field.

Inbound –

This field is not used. NCIR will ignore value if sent.

Outbound –

NCIR will not populate this field.

MSH-21 Message Profile Identifier (EI) 01598

Definition: Message Profile Identifier. This field is required for the Z22-VXU and Z23-ACK messages.

MSH|^~\&|NCIR-SHORT-ORG|NCIR-SHORT-ORG||NCIR|20121212100101-
0500||VXU^V04^VXU_V04|1|P|2.5.1|||ER|AL||||Z22^CDCPHINVS|

Inbound –

The value accepted in this field is Z22^CDCPHINVS. If the field is blank or it has a different value than the one accepted, the message will be rejected and an error sent: "MSH-21: Message Profile Identifier missing or invalid."

Outbound –

NCIR will populate this field with Z23^CDCPHINVS for the Z23-ACK.

NCIR will populate this field with Z22^CDCPHINVS for the Z22-VXU Outbound Organization Extract.

MSH-22 Sending Responsible Organization{ XE “Sending responsible organization” }

Definition: This field has a usage of “RE”. This field identifies the initiator of the message. The Sending Responsible Organization is the Business organization that originated and is accountable for the content of the message.

MSH|^~\&|NCIR-SHORT-ORG|NCIR-SHORT-ORG||NCIR|20121212100101-
0500||VXU^V04^VXU_V04|1|P|2.5.1|||ER|AL||||Z22^CDCPHINVS|**NCIR-SHORT-ORG**

Inbound –

1. Use the NCIR short name of the organization (e.g., NCIR-SHORT-ORG) in MSH-22 Component 1. NCIR will provide the NCIR short name at the time of onboarding.
2. If MSH-22 is populated, but does not match MSH-4 (sending facility), an error message is shown with the message rejected: "ERR||MSH^1^22^^|207^Application internal error^HL70357^^|E|||MSH-22 Sending Responsible Organization [insert sent value] does not match MSH-4 Sending Facility.||||||".

Outbound –

When sending, NCIR will always use “NCIR”.

MSH-23 Receiving Responsible Organization{ XE “Receiving responsible organization” }

Definition: This field has a usage of “RE”. This field identifies the recipient of the message. The Receiving Responsible Organization is the Business organization that is the intended receiver of the message and is accountable for acting on the data conveyed by the transaction.

MSH|^~\&|NCIR-SHORT-ORG|NCIR-SHORT-ORG||NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P|2.5.1|||ER|AL||||Z22^CDCPHINVS|NCIR-SHORT-ORG|**NCIR**

Inbound –

Receiving Responsible Organization will be accepted in MSH-23. Populate with “NCIR”

Outbound –

NCIR will populate MSH-23 (Receiving Responsible Organization) with the same value as MSH-6 (Receiving Facility).

NK1—Next of Kin Segments (VXU Only)

The NK1 segment contains information about the patient's related parties. Any associated parties may be identified. Utilizing NK1-1-set ID, multiple NK1 segments can be sent to patient accounts.

Table 5-5-Next of Kin Segment (NK1)

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	4	SI	[1..1]		Set ID - NK1	R	R	
2		XPN	[1..*]		Name	R	R	The first instance is the legal name and is required.
3		CE	[1..1]	0063	Relationship	R	R	
4		XAD	[0..*]	0289	Address	RE	RE	The first instance shall be the primary address.
5		XTN	[0..*]		Phone Number	RE	RE	The first instance shall be the primary phone number.
6		XTN	[0..*]		Business Phone Number	O	X	
7		CE	[0..1]	0131	Contact Role	O	X	
8	8	DT	[0..1]		Start Date	O	X	
9	8	DT	[0..1]		End Date	O	X	
10	60	ST	[0..1]		Next of Kin / Associated Parties Job Title	O	X	
11		JCC	[0..1]	0327/0328	Next of Kin / Associated Parties Job Code/Class	O	X	
12		CX	[0..1]		Next of Kin / Associated	O	X	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
					Parties Employee Number			
13		XON	[0..1]		Organization Name - NK1	O	X	
14		CE	[0..1]	0002	Marital Status	O	X	
15	1	IS	[0..1]	0001	Administrative Sex	O	X	
16		TS	[0..1]		Date/Time of Birth	O	X	
17	2	IS	[0..1]	0223	Living Dependency	O	X	
18	2	IS	[0..1]	0009	Ambulatory Status	O	X	
19		CE	[0..1]	0171	Citizenship	O	X	
20		CE	[0..1]	0296	Primary Language	O	O	
21	2	IS	[0..1]	0220	Living Arrangement	O	X	
22		CE	[0..1]	0215	Publicity Code	O	O	
23	1	ID	[0..1]	0136	Protection Indicator	O	X	
24	2	IS	[0..1]	0231	Student Indicator	O	X	
25		CE	[0..1]	0006	Religion	O	X	
26		XPN	[0..1]		Mother's Maiden Name	O	X	
27		CE	[0..1]	0212	Nationality	O	X	
28		CE	[0..1]	0189	Ethnic Group	O	X	
29		CE	[0..1]	0222	Contact Reason	O	X	
30		XPN	[0..1]		Contact Person's Name	O	X	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
31		XTN	[0..1]		Contact Person's Telephone Number	O	X	
32		XAD	[0..1]		Contact Person's Address	O	X	
33		CX	[0..1]		Next of Kin/Associated Party's Identifiers	O	X	
34	2	IS	[0..1]	0311	Job Status	O	X	
35		CE	[0..1]	0005	Race	O	X	
36	2	IS	[0..1]	0295	Handicap	O	X	
37	16	ST	[0..1]		Contact Person Social Security Number	O	X	
38		ST	[0..1]		Next of Kin Birth Place	O	X	
39	2	IS	[0..1]		VIP Indicator	O	O	

Example:

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^|1234 W MAIN ST^^ANYTOWN^NC^27850 ^M^NC091^|^PRN^PH^
^919^5551234^|||||||ENG^English||02|||||||

Business Rule:

If NK1segment is missing, and client age is less than 18 years, the following warning message will be returned. "NK1-Responsible person required in the NCIR. No NK1 segment provided."

If NK1 segment is missing, the client is 18 years or older, and if there is no address or phone number in PID-11 and/or PID-13, the following warning message will be returned:

"Contact address and/or phone number required. Please send address and/or phone number."

NK1 Field Definitions

NK1-1 Set ID - NK1

Definition: This is a required field. Sequential number format, numbering will not restart for each client record. Use "1" for the first NK1 within the message, "2" for the second, and so forth. Although this field is required by HL7, NCIR will ignore its value, and there is no requirement that the record for the same responsible person keep the same sequence number across multiple messages, in the case that information from the same record is transmitted more than once.

NK1|1|

Inbound –

Use "1" for the first NK1 within the message, "2" for the second, and so forth.

If more than 4 responsible persons are sent in inbound, only 4 NK1 segments will be accepted and a warning message will be generated: "NK1: Only up to 4 responsible persons accepted."

Outbound –

NCIR will send the sequential number of the NK1 segment. ("1" for the first NK1 segment,"2" for the second and so forth)

NK1-2 Name

Definition: Name of the responsible person who cares for the client.

NK1|1|Last Name^First Name^Middle Name^^^^L^|

Inbound –

Supply name in Last Name^First Name format. If no name is provided in this field but the segment has an address, populate this field with "NO LAST NAME" and store the address. A warning message will be returned: "NK1-2: Name was not provided." The new Responsible Person created will have an "Unknown" relationship to the client.

Populate NK1-2.7 with Name Type Code L. Missing or invalid Name Type Code will return a warning.

Outbound –

NCIR will send out the name and name type code of the responsible person.

NK1-3 Relationship

Definition: Relationship of the responsible person to the client. See data type CE and Table 0063 in the HL7 tables. Use the first three components of the CE data type, for example |MTH^Mother^HL70063|.

NK1|1|Last Name^First Name^Middle Name^^^L^|**MTH^MOTHER^HL70063^^^**|

Inbound –

If no relationship or invalid relationship, default to Unknown and send warning message: “NK1-3: Relationship missing or invalid. Defaulted to “Unknown.”

If two or more responsible persons with the same relationship are sent, only one person per relationship type is saved.

NCIR will accommodate all values from CDC table 0063 along with the current values in NCIR UI

Outbound –

NCIR will send out the relationship of responsible person and refer to HL70063 for values sent..

NK1-4 Address

Definition: Responsible person’s mailing address.

NK1|1|LAST^FIRST^MIDDLE^^^L^|**MTH^MOTHER^HL70063^^^1234 W MAIN ST^^ANYTOWN^NC^27850^^M^^NC091^^|**

Inbound –

If empty, NCIR will return a warning message.

NCIR will accept up to 4 responsible persons. NCIR accepts street address, other designation, city, state, zip, address type and county in the XAD data type. Please provide at least one responsible person for each client with address and/or phone number. Always send address and phone number every time even if only one of them is changed.

If name is provided without address or phone number, reject segment and send error message: "NEITHER ADDRESS, NOR TELEPHONE SPECIFIED. NK1 SEGMENT IGNORED."

If the name, address and phone number are not provided, reject segment and send error message: "NEITHER LAST NAME, ADDRESS, NOR TELEPHONE SPECIFIED. NK1 SEGMENT IGNORED".

If county code (NK1-4.9 - HL70289 table) is not valid, NCIR returns error message, "NK1-4: County code invalid. Code ignored. If client resides within the state, submit the county of the responsible person using 0289 table values. If the responsible person resides out of state, use ZZ999 for county. A blank or empty value in county field translates to "unknown".

If State (NK1-4.4) is invalid, the following warning message is returned " NK1-4 Invalid state code (XX). No value stored.".

Use 'M' for Address type (NK1-4.7 - HL70190 table). If Address type is not 'M', the following warning message is returned: "NK1-4: Invalid Address Type: <address type>. Defaulting to M."

Outbound –

NCIR will send out the responsible person's address, if there is one.

NK1-5 Phone Number

Definition: Responsible person's phone number.

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^|1234 W MAIN ST^ANYTOWN^NC^27850^^M^NC091^^|^PRN^PH^
^^919^5551234^^|

Inbound –

If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th, 7th, 8th, and 9th components for specification of area code, phone number, extension and text, respectively (e.g.|^PRN^^^919^5551234^1234555^|

If NK1-5.2 (Telecommunication use code) is not a valid value from the HL7 0201 table, NCIR will return the following warning message: "NK1-5: INVALID TELECOMUNICATIONS USE CODE, PHONE NUMBER IGNORED".

If NK1-5.2 (Telecommunication use code) is not PRN, NCIR will return the following warning message and ignore submitted phone number: "NK1-5: NCIR only accepts PRN (Primary residence number), PHONE NUMBER IGNORED".

If NK1-5.2 (Telecommunication use code) is PRN and NK1-5.7 (Local Number) is missing, NCIR will return the following warning message: "NK1-5: Phone number missing or invalid".

If NK1-5.6 (Area/City Code) is a non-blank value but is not numeric, NCIR will return the following warning message: "NK1: Phone number missing or invalid".

If NK1-5.7 (Local Number) is a non-blank value but is not numeric, NCIR will return the following warning message: "NK1: Phone number missing or invalid".

Use 'PH' for NK1-5.3 (Telecommunication equipment type) .

Outbound –

When PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will populate component 3 with PH, and use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively (e.g.|^PRN^PH^^919^5551234^1234555^|

NK1-20 Primary Language

Definition: Indicates the responsible person's primary language.

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^|1234 W MAIN
ST^^ANYTOWN^NC^27850^^M^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^A|||||||ENG^English^HL70296||02|||||||
|||||||Y

Inbound –

Accepted languages in UI: English, Hmong, Somali, and Spanish. Please refer to table 0296.

If other values are submitted, NCIR will default to "English" and return the following warning message: "NK1-20: Primary language of responsible person <resp person> defaulted to English."

Outbound –

Send the responsible person's language that is set in UI.

NK1-22 Publicity Code

Definition: NK1-22 Controls whether recall/reminder notices are sent for the responsible person.

NK1|1|LAST^FIRST^MIDDLE^~^L^|MTH^MOTHER^HL70063^~|1234 W MAIN
ST^ANYTOWN^NC^27850^M^NC091^~|^PRN^PH^ncirxyz@yourorg.com^~919^5551234^~|||||||ENG^English||02|

Inbound –

NCIR will recognize "01" to indicate no recall/reminder notices or "02" recall/reminder notices are sent.

If client is deceased, irrespective of what is sent, NCIR will default to 01.

If client not deceased and no value is provided or the value is invalid, NCIR will default to "02."

Outbound –

NCIR will send value "01" or "02" to indicate whether reminder notices are sent for the RP. If client deceased, "01" is sent out to prevent notices for deceased client.

NK1-39 VIP Indicator

Definition: Indicates whether Responsible person is identified as a "Primary" Responsible person.

NK1|1|LAST^FIRST^MIDDLE^~^L^|MTH^MOTHER^HL70063^~|1234 W MAIN
ST^ANYTOWN^NC^27850^M^NC091^~|^PRN^PH^ncirxyz@yourorg.com^~919^5551234^~|||||||ENG^English||02|||||||Y

Inbound –

This field is used to indicate if the responsible person is the primary responsible person. ***The primary responsible person decides the responsible person used in reminder/recall, reports as well as an input for client match in some cases.***

Values: "Y" - RP is primary; "N" – RP is not primary.

If more than one primary responsible person is identified, NCIR will save only one as primary responsible person (logic based on a scoring system).

The county corresponding to primary responsible person is stored as the county of residence if no county is provided in the PID-11 (client address).

Note on NK1-39 and responsible person: NCIR users have the ability to mark one responsible person as primary. However, no field exists within HL7 2.5.1 that allows a responsible person to be marked as primary. Hence this field is used to indicate the same. If your EHR is not able to use this field to mark a responsible person as primary, your users can continue to mark the responsible person in the NCIR if necessary.

Outbound –

Set to Y if the responsible person is set in UI as primary contact.

OBX—Observation Result Segment (VXU Only)

The observation result segment has many uses. It carries observations about the object of its parent segment. In the VXU it is associated with the RXA or immunization record. The basic format is a question (OBX-3) and an answer (OBX-5).

The examples listed below are categorized based on information OBX conveys in NCIR context

Funding Source:

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|||20121219|
OBX|2|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^NIP008^^|||||F|||20130401|

Eligibility Code:

OBX|3|CE|64994-7^vaccine fund pgm elig cat^LN|1|V02^Medicaid^HL70064|||||F|||20130401|||VXC41^per visit^CDCPHINVS

VIS presented and published dates:

An OBX segment identifying the vaccine should precede VIS Publication date. Single antigen and combination vaccines are identified using OBX-3 of 30956-7. After OBX segment identifying the vaccine, send OBX segment with OBX-3 value of 29768-9 for VIS publication date and OBX-3 value of 29769-7 for VIS presentation date.

Alternatively, the Global Document Type Identifier (GDTI), may be submitted to report VIS. Each VIS Date in a Combination Vaccine should be identified individually. To submit VIS data using GDTI, submit OBX-3 value of 69764-9 to identify the vaccine and VIS publication date, followed by OBX-3 29769-7 for VIS presentation date. The GDTI is a 24-digit text string; values are listed in HL7 table 0396 and sent with coding system CDCPHINVS.

Example: GDTI segment

OBX|1|CE|69764-9^Document Type^LN|1|253088698300012711120420^MMR^CDCPHINVS |||||F|||20091010<CR>

Multi-vaccine VIS dates may be submitted in either method.

All OBX segments related to VIS dates are tied together using OBX-4 value (See example below for single and combo vaccine).

Example: For a single antigen: [Note OBX-4 value tying the segments together.]

RXA|0|1|20091010|20091010|03^MMR^CVX^MMR II^MMR II^VTN|0.5|ML^MILLILITERS^UCUM||00^New immunization
record^NIP0017832-1^Lemon^Mike^A|^__^SITE-99999|||||LOTABC123|20111001|MSD^MVX|||CP

OBX|1|CE|**30956-7**^vaccine type^LN|1|03^MMR^CVX|||||F|||20120223<CR>

OBX|2|TS|29768-9^VIS Publication Date^LN|1|20080110|||||F|||20120223<CR>

OBX|3|TS|29769-7^VIS Presentation Date^LN|1|20091010|||||F|||20120223<CR>

Example: For a combo vaccine,

RXA|0|1|20091010|20091010|22^DTP-Hib^CVX^TETRAMUNE^Tetramune^VTN|0.5|ML^MILLILITERS^UCUM||00^New immunization record^NIP0017832-1^Lemon^Mike^A|^A^SITE-99999|||||EZ342|20111001|MSD^MVX||CP

OBX|1|TS|**38890-0**^Component Vaccine Type^LN|1|107^DTaP^CVX|||||F

OBX|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20070517|||||F|||20091010|||||||||

OBX|3|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|1|20091010|||||F|||20091010|||||||||

OBX|4|TS|**38890-0**^Component Vaccine Type^LN N|2|17^Hib^CVX|||||F

OBX|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|20140204|||||F|||20091010|||||||||

OBX|6|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|2|20091010|||||F|||20091010|||||||||

Comments/Reaction/Special Indication:

OBX|1|CE|30945-0^Contraindication^LN|1|91930004^Allergy Egg^SCT^A|||F|||20100101|
OBX|1|CE|31044-1^Reaction^LN|2|39579001^Anaphylaxis^CDCPHINVS^A|||F|||20100101|
OBX|1|CE|59785-6^Special^LN|3|VXC7^Rabies Exposure^CDCPHINVS^A|||F|||20100101|
OBX|1|CE|59784-9^Disease with presumed immunity^LN^A|4|371111005^Immunity:
Measles^SCT^A|||F|||20121219|||20201231|||||

Table 5-6 Observation Segment (OBX)

SEQ	LEN	Data Type	Cardinality	Value Sets	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	4	SI	[1..1]		Set ID – OBX	R	R	
2	2	ID	[1..1]	0125	Value Type	R	R	CE, NM, DT, or TS
3		CE	[1..1]		Observation Identifier	R	R	This indicates what this observation refers to. It poses the question that is answered by OBX-5.
4	20	ST	[1..1]		Observation Sub-ID	R	R	
5		Varies ²	[1..1]		Observation Value	R	R	This is the observation value and answers the question posed by OBX-3
6		CE	[0..1]		Units	CE	CE	If OBX-2 is NM, and OBX-3 is 30973-2, NCIR will send NA^UCUM in OBX-6
7	60	ST	[0..1]		References Range	O	X	
8	5	IS	[0..1]	0078	Abnormal Flags	O	X	
9	5	NM	[0..1]		Probability	O	X	
10	2	ID	[0..1]	0080	Nature of Abnormal Test	O	X	
11	1	ID	[1..1]	0085	Observation Result Status	R	R	Constrain to F
12		TS	[0..1]		Effective Date of Reference Range Values	O	X	
13	20	ST	[0..1]		User Defined Access Checks	O	X	
14		TS_NZ	[1..1]		Date/Time of the Observation	RE	RE	Required for certain observations.
15		CE	[0..1]		Producer's Reference	O	X	

16		XCN	[0..1]		Responsible Observer	O	X	
17		CE	[0..1]		Observation Method	O	RE	If OBX-3 is 64994-7 field must contain value VXC41.
18		EI	[0..1]		Equipment Instance Identifier	O	X	
19		TS	[0..1]		Date/Time of the Analysis	O	O	
20			[0..1]		Reserved for harmonization with V2.6	O	X	
21			[0..1]		Reserved for harmonization with V2.6	O	X	
22			[0..1]		Reserved for harmonization with V2.6	O	X	
23		XON	[0..1]		Performing Organization Name	O	X	
24		XAD	[0..1]		Performing Organization Address	O	X	
25		XCN	[0..1]		Performing Organization Medical Director	O	X	

² The length of the observation field is variable, depending upon value type. See *OBX-2 value type*.

OBX Field Definitions

OBX-1 Set ID - OBX

Definition: This is a required field. Sequential numbers, that do not restart for each ORC/RXA group. Use "1" for the first OBX within the message, "2" for the second, and so forth.

OBX|1|

Inbound –

If not a numeric value, reject the message and send an error message: "OBX-1: Set ID – OBX invalid. Please enter a numeric value."

If missing, reject the message and send error message: "OBX-1: Set ID – OBX missing."

Outbound –

NCIR will send the sequence number.

OBX-2 Value Type

Definition: This is a required field. This field contains the data type which defines the format of the observation value in OBX-5.

OBX|1|CE|

Inbound –

For incoming PO-NCIR data, Data Exchange accepts CE, TS, NM, DT.

If field is missing or invalid, reject message and send error: "OBX-2: Value Type missing or invalid."

Outbound –

NCIR will send out values of CE for Coded Entry, TS for Timestamp, NM for Number, and DT for Date, depending on what is actually sent in OBX-5.

OBX-3 Observation Identifier

Definition: This indicates what this observation refers to. It poses the question that is answered by OBX-5.

OBX|1|CE|30963-3^Vaccine purchased with^LN|

Inbound –

If not a valid value (other than the values identified) or empty field, send an error message and reject the segment with message: "Invalid OBX segment. OBX-3 Observation Id missing or invalid."

For each administered vaccine (state or privately purchased), an OBX segment carrying vaccine funding information (state supplied or privately purchased) is required. That is, OBX segment with OBX-3 = 30963-3 and OBX-5 = state supplied (VXC1 or VXC2) or privately purchased (PHC70) is required.

For each state supplied vaccine administered, eligibility code is also required. Eligibility code is exchanged using an OBX segment (OBX-3 = 64994-7). If multiple state supplied doses were administered on a given day, then each RXA segment must be accompanied by an OBX segment carrying its eligibility code. The set of valid NCIR eligibility code is provided in the table below corresponding to OBX-3 value of 64994-7. For privately purchased vaccine, eligibility code is optional and may be sent along with each dose and will be stored if sent.

For each administered vaccine (state supplied or privately purchased), provide VIS published date and VIS presented date using an OBX segment .An OBX segment before the VIS dates identifies the vaccine component for which the VIS dates apply. The OBX-3 value used to identify the vaccine varies based on whether the vaccine is single antigen or combo vaccine as noted below. For an example of submitting VIS dates for single antigen and combo vaccine, refer above under OBX segment..

For Single antigen and Combination vaccines: Use OBX-3 value of 30956-7 (Vaccine Type) to identify a single antigen vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value of 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date and all three OBX segments share the same OBX-4 value grouping the segments. If the number of VIS submitted is less than required for the vaccine given, a warning will be returned.

Alternatively, the Global Document Type Identifier (GDTI), may be submitted to report VIS. Each VIS Date in a Combination Vaccine should be identified individually. To submit VIS data using GDTI, submit OBX-3 value of 69764-9 to identify the vaccine and VIS publication date, followed by OBX-3 29769-7 for VIS presentation date. The GDTI is a 24-digit text string; values are listed in HL7 table 0396 and sent with coding system CDCPHINVS.

Example: GDTI segment

OBX|1|CE|69764-9^Document Type^LN|1|253088698300012711120420^MMR^CDCPHINVS|||||F|||20091010<CR>

Multi-vaccine VIS dates may be submitted in either method.

The table below lists the values used in OBX for Inbound HL7 message.

For Historical vaccine, funding information and eligibility code are not applicable and hence not needed.

OBX-3 value	Corresponding valid OBX-5 value
29769-7	yyyymmdd0000^Date Vaccine Information Statement Presented^NIP003^^
29768-9	yyyymmdd0000^Date Vaccine Information Statement Published^NIP003^^
30963-3	VXC50^Public Funds^NIP008^^ PHC70^Private Funds^CDCPHINVS^^
30956-7	CVX code is presented code for the vaccine. Each vaccine group is associated with a group of OBX, using the OBX-4 observation sub-id. OBX 1 CE 30956-7^vaccine type^LN 1 17^Hib^CVX F<CR> OBX 4 CE 30956-7^vaccine type^LN 1 45^Hep B, unspecified formulation^CVX F<CR>
69764-9	Global Document Type Identifier reports VIS vaccine group and Publication Date. OBX 1 CE 69764-9^Document Type^LN 1 253088698300012711120420^MMR^CDCPHINVS F 20091010
64994-7	NCA03^North Carolina Health Choice^HL70064 NCA01^Insured ^HL70064 NCA02^Underinsured (No FQHC RHC)^HL70064 V02^Medicaid^HL70064 V03^Not Insured^HL70064 V04^American Indian Alaskan Native^HL70064 NCA04^Title X Uninsured Unaccompanied Minor^HL70064 *

OBX-3 value	Corresponding valid OBX-5 value
59784-9 , 59785-6, 30945-0, 31044-1, 75505-8	For client comment specific OBX-5 values. See Appendix

* NCA04 Title X Uninsured Unaccompanied Minor may only be accepted when owning organization has the Title X indicator set.

Outbound –

NCIR sends out a number of vaccination related information through OBX. Depending on information sent out, a value from table below will be sent out in OBX-3. NCIR sends out funding source (state supplied or privately purchased), eligibility code, and VIS information presented and published for each administered dose. NCIR also sends out recommendations and series information depending on set up in the NCIR. Refer to table below for values sent in OBX-3 and corresponding OBX-5.

OBX-3 value	Corresponding valid OBX-5 value
29769-7	yyyymmdd0000^Date Vaccine Information Statement Presented^NIP003^^
29768-9	yyyymmdd0000^Date Vaccine Information Statement Published^NIP003^^
30963-3	VXC50^Public Funds^NIP008^^
	PHC70^Private Funds^CDCPHINVS^^
30979-9	Vaccines due next: first triplet CVX code (required) and second triplet can record CPT code, vaccine group code, or trade name ID e.g. 85^HepA^CVX^90730^HepA^C4 45^HepB^CVX^90731^HepB^C4
30980-7	Date vaccine due: yyyymmdd
59777-3	Latest date next dose may be given: yyyymmdd
30981-5	Earliest date to give: yyyymmdd
59778-1	Date when overdue: yyyymmdd
30973-2	Vaccine due next dose number in series (numerical value, e.g. 1, 2,3)
30982-3	Reason applied by forecast logic to project this vaccine: ACIP schedule

OBX-3 value	Corresponding valid OBX-5 value
30956-7	CVX code is presented code for the vaccine. Each vaccine group is associated with a group of OBX, using the OBX-4 observation sub-id. OBX 1 CE 30956-7^vaccine type^LN 1 17^Hib^CVX F<CR> OBX 4 CE 30956-7^vaccine type^LN 1 45^Hep B, unspecified formulation^CVX F<CR>
30973-2	Dose Number in Series (numerical value, e.g. 1,2,3)
64994-7	NCA03^North Carolina Health Choice^HL70064 NCA01^Insured ^HL70064 NCA02^Underinsured (No FQHC RHC)^HL70064 V02^Medicaid^HL70064 V03^Not Insured^HL70064 V04^American Indian Alaskan Native^HL70064 NCA04^Title X Uninsured Unaccompanied Minor^HL70064 *
59784-9 , 59785-6, 30945-0, 31044-1, 75505-8	For client comment specific OBX-5 values. See Appendix

OBX-4 Observation Sub-ID

Definition: If the OBX is used for sending out Series Information and Recommendations (on the Outbound), the number in this field groups together related OBX segments. For example, a single recommendation for DTP/aP is sent in a grouped set of five OBX segments, all with the same sub-identifier in OBX-4. The sub-identifier increments sequentially.

Inbound –

OBX-4 is required. If missing, a warning is returned.

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|

Outbound –

OBX-4 is used to combine related OBX segments.

OBX-5 Observation Value

Definition: This is a required field and is used for reporting the value associated with OBX-3. See Appendix C for additional information on submitting Vaccine Deferrals.

Examples:

Vaccine Funding Information:

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|**VXC2^State Funds^CDCPHINVS|**

Eligibility code:

OBX|2|64994-7^Vaccine fund pgm elig cat^LN|1|**V02^Medicaid|||||F|||20130503|||VXC41^per visit^CDCPHINVS|||||**

Vaccine identification segment followed by VIS date presented and published.

Single-Antigen Vaccine

OBX|1|CE|30956-7^vaccine type^LN|1|03^MMR^CVX|||||F|||20120223<CR>
OBX|2|TS|29768-9^VIS Publication Date^LN|1|20080110|||||F|||20120223<CR>
OBX|3|TS|29769-7^VIS Presentation Date^LN|1|20091010|||||F|||20120223<CR>

Combination Vaccine

(Each component in a Combination Vaccine should be identified individually and followed by VIS date presented and published.)

OBX|1|TS|38890-0^Component Vaccine Type^LN|1|107^DTaP^CVX|||||F
OBX|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20070517|||||F|||20091010|||||
OBX|3|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|1|20091010|||||F|||20091010|||||
OBX|4|TS|38890-0^Component Vaccine Type^LN N|2|17^Hib^CVX|||||F
OBX|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|20140204|||||F|||20091010|||||
OBX|6|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|2|20091010|||||F|||20091010|||||

Contraindications, Immunity, special indication and reactions:

OBX|5|CE|59784-9^Disease with presumed immunity^LN^^|1|371111005^Immunity: Measles^SCT^^|
OBX|1|CE|30945-0^Contraindication^LN|2|91930004^Allergy Egg^SCT^^|||||F|||20100101|
OBX|1|CE|31044-^Reaction^LN|3|39579001^Anaphylaxis^CDCPHINV^S^^|||||F|||20100101|
OBX|1|CE|59785-6^Special^LN|4|VXC7^Rabies Exposure^CDCPHINV^S^^|||||F|||20100101|

Inbound –

If invalid or field is empty, reject the message and send an error message.

For each administered vaccine (state or privately purchased), an OBX segment carrying vaccine funding information (state supplied or privately purchased) is required. That is, OBX segment with OBX-3 = 30963-3 and OBX-5 = state supplied (VXC50) or privately purchased (PHC70) is required.

For each state supplied vaccine administered, eligibility code is also required. Eligibility code is exchanged using an OBX segment (OBX-3 = 64994-7). If multiple state supplied doses were administered on a given day, then each RXA segment must be accompanied by an OBX segment carrying its eligibility code. The set of valid NCIR eligibility code is provided in the table below corresponding to OBX-3 value of 64994-7. For privately purchased vaccine, eligibility code is optional and may be sent along with each dose and will be stored if sent.

For each administered vaccine (state supplied or privately purchased), provide VIS published date and VIS presented date using an OBX segment. Use an OBX segment to identify the vaccine component for which the VIS date applies. The OBX-3 value used to identify vaccine depends on whether vaccine is single antigen or combo vaccine.

For Single antigen and combination vaccines: Use OBX-3 value of 30956-7 (Vaccine Type) to identify a vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value of 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date. All three OBX segments share the same OBX-4 value grouping the segments.

The table above lists the values used in OBX for Inbound HL7 message.

For Historical vaccine, funding information and eligibility code are not applicable and hence not needed.

Outbound –

The values sent out in OBX-5 correspond to the question in OBX-3. The values are listed in the table included under OBX-3. In the example below, it provides the CVX code for the component.

OBX|1|CE|38890-0^Component Vaccine Type^LN|1|21^Varicella^CVX|||||F<CR>
OBX|4|CE|38890-0^Component Vaccine Type^LN|2|03^MMR^CVX|||||F<CR>

OBX-11 Observation Result Status

Definition: This field contains the observation result status. This field is constrained to 'F'
OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|

Inbound –

Records the observation result status.

Outbound –

Records the observation result status.

OBX-14 Date/Time of the Observation

Definition: Records the time of the observation. NCIR ignores any time component. (yyyymmdd)
1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|||20121219|

Inbound –

Records the time of the observation (yyyymmdd). This is a required field for certain observations. When required, populate it with observation date, else the segment will be rejected without this field.

If OBX-14 is missing, or if OBX-14 is before the client birth date, then the message will be rejected with the error: "OBX-14: Required field. Enter valid date."

The following OBX-3 Observation scenarios require an Observation Date in OBX-14:

- 31044-1^Reaction^LN

-
- 29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN
 - 29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN
 - 30945-0^Vaccination contraindication/precaution^LN^^
 - 59784-9^Disease with presumed immunity^LN^^
 - 64994-7^vaccine fund pgm elig cat^LN

Outbound –

Records the time of the observation (yyyymmdd).

OBX-17 Observation Method

Definition: Records the method for capturing funding program eligibility. This field is constrained to VXC40 or VXC41.

OBX|2|CE|64994-7^vaccine fund pgm elig cat^LN|1|NCA04^TITLE X^HL70064|||||F|||20130401|||**VXC41^per visit^CDCPHINVS**

Inbound –

Records the method for capturing funding program eligibility.

Outbound –

Records the method for capturing funding program eligibility.

OBX-19 Date/Time of the Analysis

Definition: This field is used for comment end date.

OBX|4|CE|59784-9^Disease with presumed immunity^LN^^|1|371111005^Immunity:
Measles^SCT^|||F|||20121219|||**20201231**|||||

Inbound –

This field is used to collect observation end date. Comment end date (yyyymmdd) is optional and must be after Applies-To Date (effective date – OBX-14). If before, ignore the value and send warning message: "OBX-19: Comment end date is before applies-to date. Date ignored"

Outbound –

NCIR will populate this field with client comments end date if available.

ORC—Order Request Segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). Each RXA must be associated with one ORC, based on HL7 2.5.1 standard.

Example 1: immunization from Inventory

ORC|RE||1|||||^Entered by Last^Entered by First~~~~~Name type code||^Clinician Last^Clinician First~~~~~Name type code|||NCIR-SHORT-ORG~~~|

Example 2: historical immunization:

ORC|RE||1|

Example 3: refusal/religious exemption:

ORC|RE||9999|

Table 5-7 Common Order Segment (ORC)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	ID	[1..1]	0119	Order Control	R	R	use RE
2		EI	[0..1]		Placer Order Number	RE	X	See Guidance below.
3		EI	[1..1]		Filler Order Number	R	R	See Guidance below.
4		EI	[0..1]		Placer Group Number	O	X	
5	2	ID	[0..1]	0038	Order Status	O	X	
6	1	ID	[0..1]	0121	Response Flag	O	X	
7		TQ	[0..0]		Quantity/Timing	X	X	
8		EIP	[0..1]		Parent	O	X	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
9		TS	[0..1]		Date/Time of Transaction	O	X	
10		XCN	[0..1]		Entered By	RE	O	This is the person that entered this immunization record into the system.
11		XCN	[0..1]		Verified By	O	X	
12		XCN	[0..1]		Ordering Provider	RE	RE	This shall be the provider ordering the immunization. It is expected to be empty if the immunization record is transcribed from a historical record.
13		PL	[0..1]		Enterer's Location	O	X	
14		XTN	[0..1]		Call Back Phone Number	O	X	
15		TS	[0..1]		Order Effective Date/Time	O	X	
16		CE	[0..1]		Order Control Code Reason	O	X	
17		CE	[0..1]		Entering Organization	RE	RE	This is the provider organization that entered this record/order.
18		CE	[0..1]		Entering Device	O	X	
19		XCN	[0..1]		Action By	O	X	
20		CE	[0..1]	0339	Advanced Beneficiary Notice Code	O	X	
21		XON	[0..1]		Ordering Facility Name	O	X	
22		XAD	[0..1]		Ordering Facility Address	O	X	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
23		XTN	[0..1]		Ordering Facility Phone Number	O	X	
24		XAD	[0..1]		Ordering Provider Address	O	X	
25		CWE	[0..1]		Order Status Modifier	O	X	
26		CWE	[0..1]	0552	Advanced Beneficiary Notice Override Reason	O	X	
27		TS	[0..1]		Filler's Expected Availability Date/Time	O	X	
28		CWE	[0..1]	0177	Confidentiality Code	O	X	
29		CWE	[0..1]	0482	Order Type	O	X	
30		CNE	[0..1]	0483	Enterer Authorization Mode	O	X	
31		CWE	[0..1]		Parent Universal Service Identifier	O	X	

ORC Field Definitions

ORC-1 Order Control

Definition: Determines the function of the order segment. The value for VXU is RE.

ORC|RE|

Inbound –

Constrained to RE

Outbound –

If empty field or value other than RE, NCIR defaults to RE.

ORC-3 Filler Order Number

Definition: NCIR will use this value to identify the order within provider organization sent orders.

ORC|RE||1|||||~~~~~|12345^Clinician Last^Clinician First|||||1234^Organization Site^^^|||||||

Inbound –

NCIR suggests that providers send their immunization identifier in this field. If a refusal/religious exemption is sent, value has to be "9999".

NCIR will store the value at the immunization level and use the Filler Order Number to pull the immunization associated with it.

If value is missing, do not process the immunization and send error message "ORC-3: Filler Order Number missing."

Outbound –

NCIR will send Immunization ID in this field. For refusals or religious exemptions, NCIR will send out "9999"

ORC|RE||105193813|||||||||

ORC-10 Entered By

Definition: (Entered By) - The name of the person that entered the immunization record into the system with the Name type code.

ORC|RE||1|||||^Entered by Last^Entered by First^^^^^Name type code|

Inbound –

If available, provide the name of the person entering the immunization into your system. Submit Name Type Code L.

Outbound –

NCIR will populate the Entered By Name and Name Type Code if valued for the immunization.

ORC-12 Ordering Provider

Definition: NCIR will provide the names of the clinicians set up in the NCIR for your organization. ORC-12 will be empty for historical immunizations (inbound and outbound).

|ID^Last Name^First Name|

Inbound –

Provider should send last name and first name of the ordering provider.

ORC|RE||1|||||^Entered by Last^Entered by First^^^^^Name type code||^Clinician Last^Clinician First^^^^^Name type code|

Ensure that the list of ordering providers set up in the NCIR and the EHR are up to date before sending data to the NCIR. NCIR on request can provide you a list of ordering providers set up for your organization in the NCIR.

For an administered dose, populate this field with an ordering provider from the list. Submit Name Type code L. If no match is found in the NCIR, default to Unknown

For an historical dose, this field can be empty.

Outbound –

NCIR will send out the Ordering Authority selected in the UI or input through Data Exchange for the immunization. Name Type Code value is L.

ORC-17 Entering Organization

Definition: *This field is not used but is considered optional.* This field identifies the organization that the enterer belonged to at the time he/she enters/maintains the order, such as medical group or department.

ORC|RE||1|||||~~~~~|12345^Clinician Last^Clinician First|||||1234^Organization Site~~~|

Inbound –

If sent, value is stored at the immunization level along with ORC-3, ORC-10, and ORC-12 if applicable.

Outbound –

NCIR will send out the Entering Organization (org which user is logged in when entering the immunization)

PD1—Patient Demographic Segment (VXU Only)

The Patient Demographic Segment contains patient demographic information that may change from time to time. There are three primary uses for this segment in Immunization Messages. These include indicating whether the person wants his/her data protected, whether the person wants to receive recall/reminder notices and the person's current status in the registry.

PD1|||||||02|N|||A|20121218134335|||

Table 5-8-Patient Demographic Segment (PD1)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	IS	[0..1]	0223	Living Dependency	O	X	
2	2	IS	[0..1]	0220	Living Arrangement	O	X	
3	250	XON	[0..1]		Patient Primary Facility	O	X	
4	250	XCN	[0..1]		Patient Primary Care Provider Name & ID No.	O	X	
5	2	IS	[0..1]	0231	Student Indicator	O	X	
6	2	IS	[0..1]	0295	Handicap	O	X	
7	2	IS	[0..1]	0315	Living Will Code	O	X	
8	2	IS	[0..1]	0316	Organ Donor Code	O	X	
9	1	ID	[0..1]	0136	Separate Bill	O	X	
10	250	CX	[0..1]		Duplicate Patient	O	X	
11	250	CE	[0..1]	0215	Publicity Code	RE	RE	
12	1	ID	[0..1]	0136	Protection Indicator	RE	RE	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
13	8	DT	[0..1]		Protection Indicator Effective Date	CE	X	
14	250	XON	[0..1]		Place of Worship	O	X	
15	250	CE	[0..1]	0435	Advance Directive Code	O	X	
16	1	IS	[0..1]	0441	Immunization Registry Status	RE	RE	
17	8	DT	[0..1]		Immunization Registry Status Effective Date	C(RE/X)	C(RE/X)	If the registry status field is filled, then this should be valued.
18	8	DT	[0..1]		Publicity Code Effective Date	CE	X	
19	5	IS	[0..1]	0140	Military Branch	O	X	
20	2	IS	[0..1]	0141	Military Rank/Grade	O	X	
21	3	IS	[0..1]	0142	Military Status	O	X	

PD1 Field Definitions

PD1-11 Publicity Code

Definition: Use NK1 to specify choice at responsible person level.

PD1|||||||02|

NCIR will recognize “01” to indicate no recall/reminder notices or “02” recall/reminder notices are sent.

Inbound –

Submit 02 if client is not deceased; 01 if client is deceased. Use NK1 to set preferences as NCIR does not set these notices at client level.

Outbound –

NCIR will always send "02" unless client is deceased.

PD1-12 Protection Indicator

Definition: Controls visibility of records to other organizations. Indicates whether or not consent has been given (or assumed) for record sharing. In NCIR, it is not allowed to opt out. This field is always set to **N** - sharing IS allowed.

PD1|||||||02|**N**|

Inbound –

Value: "N". Any other value is ignored and NCIR will default to "N", returning the following warning message: "PID-12: Protection indicator defaulted to N".

Outbound –

Value: "N"

PD1-16 Immunization Registry Status

Definition: Identifies the status of the client to the sending organization. See table 0441.

PD1|||||||02|**N**|||**A**|

Inbound –

If this field is empty or invalid (a value other than A, I, or P, is provided), NCIR will default the client status to Active and return the following warning message: "PD1-16: Required field. <> is an invalid value. Defaulted to A."

If P is provided, client deceased status will reflect in all organizations

Outbound –

Values A, I, or P will be returned depending on whether the client is set active, Inactive or permanently deceased respectively in the NCIR for the organization.

PD1-17 Immunization Registry Status Effective Date (DT) 01570

Definition: Effective date for registry status reported in PD1-16. Format is YYYYMMDD.

PD1|||||||02|N|||A|**20121218134335**|

Inbound –

This field is not used by NCIR. If provided, NCIR will accept the value, but the data will not be used.

Outbound –

NCIR will not send any value in this field.

PID—Patient Identifier Segment (VXU Only)

The PID is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

```
PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^M^|20110219|F||2106-3^White^HL7005|1234 W MAIN ST^ANYTOWN^NC^27850^^M^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||||||2186-5^Not Hispanic or Latino^HL70189||N|1||||N|||||||
```

Table 5-9-Patient Identifier Segment (PID)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	4	SI	[0..1]		Set ID - PID	RE	RE	
2		CX	[0..0]		Patient ID	X	X	
3		CX	[1..*]	0203	Patient Identifier List	R	RE	PI = Patient Identifier (Organization Chart Number), PT = Secondary Chart Number, MR = Medical Record Id (Organization Chart Number), SR = State Record Id
4		CX	[0..0]		Alternate Patient ID - 00106	X	X	
5		XPN	[1..*]		Patient Name	R	R	The first repetition shall contain the legal name. Multiple given names or initials are separated by spaces.
6		XPN	[0..1]		Mother's Maiden Name	RE	RE	
7		TS	[1..1]		Date/Time of Birth	R	R	Required, must have month, day and year.
8	1	IS	[0..1]	0001	Administrative Sex	RE	RE	M= male, F = female, U = not determined/unspecified/unknown.

9		XPN	[0..0]		Patient Alias	X	X	This field should not be used. It was supported in earlier implementations.
10		CE	[0..*]	CDCREC	Race	RE	RE	
11		XAD	[0..*]		Patient Address	RE	RE	The first repetition should be the primary address.
12	4	IS	[0..0]	0289	County Code	X	X	County belongs in address field.
13		XTN	[0..*]		Phone Number - Home	RE	RE	The first instance shall be the primary phone number. Only one item is allowed per repetition.
14		XTN	[0..*]		Phone Number - Business	O	X	
15		CE	[0..1]	ISO0639	Primary Language	O	RE	Use ISO 0639.
16		CE	[0..1]	0002	Marital Status	O	X	
17		CE	[0..1]	0006	Religion	O	X	
18		CX	[0..1]		Patient Account Number	O	X	
19	16	ST	[0..0]		SSN Number - Patient	X	X	
20		DLN	[0..0]		Driver's License Number - Patient	X	X	
21		CX	[0..0]		Mother's Identifier	X	X	

22		CE	[0..1]	CDCREC	Ethnic Group	RE	RE	First triplet shall contain code from table 0189.
23	60	ST	[0..1]		Birth Place	O	X	Use may be specified locally.
24	1	ID	[0..1]	0136	Multiple Birth Indicator	RE	RE	The acceptable values are Y and N. If the status is undetermined, then field shall be empty.
25	2	NM	[0..1]		Birth Order	CE	C(RE/O)	If Multiple Birth Indicator is populated with Y, then this field should contain the number indicating the person's birth order, with 1 for the first child born and 2 for the second.
26		CE	[0..1]	0171	Citizenship	O	X	
27		CE	[0..1]	0172	Veterans Military Status	O	X	
28		CE	[0..1]	0212	Nationality	O	X	
29		TS	[0..1]		Patient Death Date and Time	C(RE/X)	C(RE/X)	If PID-30 (Patient Death Indicator) is valued 'Y', populate this field.
30	1	ID	[0..1]	0136	Patient Death Indicator	RE	RE	
31	1	ID	[0..1]	0136	Identity Unknown Indicator	O	X	
32	20	IS	[0..1]	0445	Identity Reliability Code	O	X	

33		TS	[0..1]		Last Update Date/Time	O	X	May be locally specified.
34		HD	[0..1]		Last Update Facility	O	X	Use is locally specified.
35		CE	[0..1]	0446	Species Code	O	X	
36		CE	[0..1]	0447	Breed Code	O	X	
37	80	ST	[0..1]		Strain	O	X	
38		CE	[0..1]	0429	Production Class Code	O	X	
39		CWE	[0..1]	0171	Tribal Citizenship	O	X	

PID Field Definitions

PID-1 Set ID - PID

Definition: (optional) This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||2186-5^Not Hispanic or Latino^HL70189||N|1|||N|||||||

Inbound –

Send the literal value ‘1’.

Outbound –

NCIR will populate with sequence number.

PID-3 Patient Identifier List

Definition: Sub-components 1 (ID), 4 (Assigning Authority/Table 0363 and 5 (Identifier Type Code /Table 0203) are required in the PID-3 field if populated. This is a repeating field where a provider can send the NCIR Client ID, NCIR Organization Chart Number and/or NCIR Secondary Chart Number.

PID|1||12978664^^^NCA^SR^~CHART^^^NCIR-SHORT-ORG^PI^~SECONDARYCHART^^^NCIR-SHORT-ORG^PT^|

Inbound –

Sub-components 1 (ID), 4 (Assigning Authority/Table 0363) and 5 (Identifier Type Code/Table 0203) are required in the PID-3 field. A provider organization can send two different identifiers: their EMR system's Chart Number, and/or Group Chart Number if available.

If chart number is sent in subcomponent 1, use PI in subcomponent 5.

If group chart number is sent in subcomponent 1, use PT in subcomponent 5.

Submit Provider's NCIR-SHOR-ORG for subcomponent 4 (Assigning Authority). This is the same value provided for use with MSH-4.

Identify the value provider organization uses to populate the Chart Number field in the NCIR. Sending this value in the NCIR Data Exchange transaction (using PI as identifier type code) will cause the least disruption.

Note: The NCIR organization Chart Number and NCIR Secondary Chart Number are stored for a client when a VXU transaction for the client is sent or when the user enters the client directly in the NCIR. This is subsequently used for matching VXU or QBP queries.

PID|1||1234567890^^^NCA^SR^~CHART123^^^NCIR-SHORT-ORG^PI^~SECOND123^^^NCIR-SHORT-ORG^PT^|

Outbound –

When NCIR is sending to an outside system, NCIR will send the client's NCIR Client ID (SR) and Chart Number (PI) when it is available. Group Chart Number (PT) will be sent in addition to Chart Number and Client ID if available.

Assigning Authority will be populated in component 4. NCIR Client ID (SR) Assigning Authority is NCA. Chart Number (PI) and Group Chart Number (PT) Assigning Authority is the NCIR-SHORT-ORG for the owning organization.

The North Carolina Immunization Registry (NCIR) strives to protect patient-sensitive data and information. In compliance with the Health Insurance Portability and Accountability Act (HIPAA), the North Carolina Local Implementation Guide (NCLIG) prohibits the use of Social Security Numbers (SSNs) as a Unique Patient Identifier (UPI) or a chart number.

PID-5 Patient Name

Definition: Patient Name is recorded in PID-5

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|

Inbound –

Record legal patient name in PID-5 (Last name^First name^Middle name)

NCIR will reject a client record with 'NO FIRST NAME' entered as the first name .

If field is empty or first name or last name is found in the junk names table, message will be rejected and the following error message will be returned: "PID-5:Patient name required"

Use 'L' (legal) for Name type code (PID-5.7). Missing Name type code or value other than L will return a warning.

If multiple names are provided, the name other than legal name will be ignored (only the first three components are used by NCIR Last Name^First Name^Middle Name)

Outbound –

NCIR will send the last name, first name, name type code and if available, the middle name.

PID-6 Mother's Maiden Name

Definition: In this context, where the mother's name is used for client identification, NCIR uses only last name and first name.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^M^|

Inbound –

If Mother's Maiden Name is not provided and the incoming record is a new client or an existing client without Mother's maiden name, NCIR will return the following warning message: "PID-6: Please provide mother's maiden name. Field is used in matching process when no other client identifier supplied." **Note: This warning is not returned if NCIR has Mother's Maiden Name already from another source.**

Use 'M' (Maiden) for Name Type Code in (PID-6.7). Missing Name Type Code or value other than M will return a warning.

Outbound –

NCIR sends out only the last name and first name of mother's maiden name and name type code (e.g. |Last Name^First Name^^^^Name Type Code^|

PID-7 Date/Time of Birth

Definition: This is a required field. Give the year, month, and day of birth (YYYYMMDD). NCIR ignores any time component.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|**20110219|**

Inbound –

1. If client matches to an existing client and incoming birth date > existing immunization date on the client, NCIR will return an error message and pend incoming client for later review.
2. If incoming birth date > any of the incoming dose date, NCIR will reject the transaction with the following error message: "PID-7: DOB is later than immunization date. Transaction rejected"
3. If field is missing or invalid, NCIR will reject the transaction with the following error message: "PID-7: Date of birth invalid or missing."

Outbound –

NCIR sends out the year, month, and day of birth (YYYYMMDD).

PID-8 Administrative Sex

Definition: Use F (Female), M (Male), or U (Unknown).

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F|

Inbound –

If blank or a value other than F, M, or U, NCIR will default to U and return the following warning message: “PID-8: Invalid value. If Blank - Defaulted to U”.

Outbound –

Returns either F, M, or U

PID-10 Race

Definition: This field refers to the patient's race. Refer to HL7 Table 0396 - Race for CDCREC valid Race values.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^CDCREC|

Inbound –

NCIR does not accept Hispanic or Latino as a race option. Submit it in the Ethnic Group PID-22. Send coding system CDCREC.

Outbound –

When sending data to provider, CDCREC table is used to plug in a race code value.

PID-11 Patient Address

Definition: This field previously contained the mailing address of the patient. Address is accepted in NK1 and not in PID-11. Do not populate this field.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005||

Inbound –

Local implementations have the flexibility to accept address here or in NK1. NCIR accepts client address in PID-11 and responsible person address and phone number in the NK1. As part of address, NCIR accepts street address, other designation, city, state, zip, address type and county in the XAD data type.

The county field (PID-11.9) is used as County of residence. If county code (PID-11.9- HL70289 table) is not valid, send warning message, "PID-11: County code invalid. Code ignored." . If client resides within the state, submit the county using 0289 table values. If person resides out of state, use ZZ999 for county. A blank or empty value in county field translates to "unknown".

Provide an address and/or phone number for each client 18 years or older in either NK1 or in PID-11/PID-13. If client is 18 years or older and neither NK1 or PID-11/PID-13 is populated, the following warning is returned. "Contact address and/or phone number required. Please send address and/or phone number."

For clients with age less than 18 years, responsible person in NK1 is required, even when PID-11/PID-13 is populated. Refer to NK1 for details.

If State (PID-11.4) is invalid, the following warning message is returned " PID-11.4 Invalid state code (XX). No value stored.".

Use 'M' for Address type (PID-11.7 - HL70190 table). If Address type is not 'M', the following warning message is returned: "PID-11: Invalid Address Type: <address type>. Defaulting to M."

Outbound –

NCIR will not populate this field.

PID-13 Phone Number - Home

Definition: This field previously contained the email address and phone number of the patient. This is now recorded in the NK1 in NCIR, See comments for PID-11

PID|1||1234567890^^^PI|^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|1234 W MAIN ST^^ANYTOWN^NC^27850 ^M^^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|

Inbound –

Use ‘PRN’ as telecommunication use code (XPN-2) from HL70201 table.

If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th, 7th, 8th, and 9th components for specification of area code, phone number, extension and text, respectively (e.g.|^PRN^^^919^5551234^1234555|^

If PID-13.2 (Telecommunication use code) is not a valid value from the HL7 0201 table, NCIR will return the following warning message: “PID-13: INVALID TELECOMUNICATIONS USE CODE”.

If PID-13.2 (Telecommunication use code) is not PRN, NCIR will return the following warning message and ignore phone number: “PID-13: NCIR only accepts PRN (Primary residence number), PHONE NUMBER IGNORED”.

If PID-13.2 (Telecommunication use code) is PRN and PID-13.7 (Local Number) is missing, NCIR will return the following warning message: “PID-13: Phone number missing or invalid”.

If PID-13.6 (Area/City Code) is non blank value but is not numeric, NCIR will return the following warning message: “PID-13: Phone number missing or invalid”.

If PID-13.7 (Local Number) is non blank value but is not numeric, NCIR will return the following warning message: “PID-13: Phone number missing or invalid”.

Use ‘PH’ for PID-13.3 (Telecommunication equipment type).

Outbound –

NCIR will not populate this field.

PID-15 Primary Language

Definition: Local implementations have the flexibility to accept primary language here or in the NK1 segment. NCIR will use NK1 to specify primary language.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||

Inbound –

Provide primary language in NK1 and do not populate this field while sending to the NCIR.

Outbound –

NCIR will not populate this field.

PID-22 Ethnic Group

Definition: This field further defines the patient's ancestry. Refer to table CDCREC - Ethnic Group.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||||2186-5^Not Hispanic or Latino^CDCREC|

Inbound –

If incoming value does not conform to HL7 table CDCREC, NCIR will default to Unknown and return the following warning message: “PID-22: Invalid value.” If blank, NCIR will default to “Unknown.”

Outbound –

Send out if a value is stored in the NCIR. Refer to CDCREC table for values. If blank in the NCIR, send out “Unknown.”

PID-24 Multiple Birth Indicator

Definition: Use Y to indicate that the client was born in a multiple birth and N to indicate client not born in a multiple birth.

- the patient was part of a multiple birth = Y
- the patient was a single birth = N

-
- multiple birth status is undetermined = Empty

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||2186-5^Not Hispanic or Latino^HL70189||N|

Inbound –

If value other than Y, N, or empty, NCIR will ignore the value and return the following warning message: “PID-24: Multiple Birth Indicator invalid. Field is ignored.”

Outbound –

NCIR will populate with Y or N if available.

PID-25 Birth Order

Definition: Relevant when client was born in a multiple birth. Use 1 for the first born, 2 for the second, etc.

Inbound –

If PID-24 field is set to Y and PID-25 is not populated, NCIR will return the following warning message: “PID-25: Client born in a multiple birth. Field must be populated.”

If field is populated, the value will be stored.

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||2186-5^Not Hispanic or Latino^HL70189||Y|2|

Outbound –

NCIR will populate with value if available (e.g. 1, 2).

PID-29 Patient Death Date and Time

Definition: The date of death, if client is deceased. Give the year, month, and day (YYYYMMDD). NCIR ignores any time component.

Inbound –

Populate death date if patient is deceased. If a death date is sent, then the Patient Death Indicator in PID-30 must indicate a value of “Y” for permanently inactive/deceased. If a deceased date is populated, then the deceased status will be reflected in all organizations associated with the client.

If death date is sent but the Patient Indicator in PID-30 is not set to Y, NCIR will default the Patient Death indicator to Y, reflect the deceased status of the patient in all organizations and send the following warning message: “PID-30: Death date is present. Patient Death indicator defaulted to Y.”

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||||||2186-5^Not Hispanic or Latino^HL70189||N|1|||**20130909|**

Outbound –

NCIR will send if value stored.

PID-30 Patient Death Indicator

Definition: This field indicates whether the patient is deceased. Refer to HL7 Table 0136 - Yes/no Indicator for valid values.

- The patient is deceased = Y
- The patient is not deceased = N
- Status is undetermined = Empty

PID|1||1234567890^^^^PI^||Last Name^First Name^Middle Name^^^^L^|Last Name^First Name^Middle Name^^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||||||2186-5^Not Hispanic or Latino^HL70189||N|1|||**20130909|Y|**

Inbound –

Populate Y or N to indicate whether patient is deceased. Even if death date is not known, PID-30 (death indicator) can be set as Y if patient is deceased. If death date is missing but PID-30 is populated with Y, the deceased status of the patient will be reflected in all organizations and the following warning message returned: "PID-29: No Death Date is provided."

Outbound –

NCIR will send Y if Patient Death Indicator is set to Y. If patient is not deceased, this field will be set to N.

RXA-- Pharmacy/Treatment Administration Segment (VXU Only)

The RXA segment carries pharmacy administration data. It is a child of an ORC segment, which is a repeating segment in the VXU message. Because ORC segments are allowed to repeat, an unlimited numbers of vaccinations may be included in a message. Each RXA must be preceded by an ORC.²

Examples:

RXA can carry administered dose (inventory dose), historical dose or parent refusal and religious exemptions.

Inventory dose:

```
RXA|0|1|20121219|20121219|03^MMR^CVX^MMR ||^Measles, mumps, and rubella live^VTN|0.5|ML^MILLILITERS^UCUM||00^New  
Immunization^|12345^Clinician Last^Clinician First^|^^^SITE-12345||||testlot1|20151226|MSD|||CP|A||||
```

```
RXA|0|1|20160512|20160512|48^Hib-PRP-T^CVX^49281-0545-05^NDC|0.5|ML^MILLILITERS^UCUM||00^New  
Immunization^|12345^Clinician Last^Clinician First^|^^^SITE-12345||||testlot1|20151226|MSD|||CP|A||||
```

Historical dose:

```
RXA|0|1|20110607|20110607|20^DTaP^CVX^Certiva^^VTN|999|||01^Historical^^^^^^^^|||||||CP|A|
```

Parent Refusal and Religious exemptions:

```
RXA|0|1|20120828|20120828|03^MMR^CVX^^|999|||||||00^parent refusal^NIP002||RE|A|
```

```
RXA|0|1|20120828|20120828|03^MMR^CVX^^|999|||||||01^Religious Exemption^NIP002||RE|A|
```

² The HL7 Version 2.5.1 document clearly indicates that any RXA must be associated with an ORC. In the case of immunization, each immunization will have its own ORC.

Table 5-10 Pharmacy/Treatment Administration (RXA)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCI/R Usage	Comment
1	4	NM	[1..1]		Give Sub-ID Counter	R	R	Constrain to 0 (zero)
2	4	NM	[1..1]		Administration Sub-ID Counter	R	R	Constrain to 1
3		TS	[1..1]		Date/Time Start of Administration	R	R	
4		TS	[0..1]		Date/Time End of Administration	RE	RE	If populated, this should be the same as Start time (RXA-3)
5		CE	[1..1]	0292	Administered Code	R	R	CVX code is strongly preferred.
6	20	NM	[1..1]		Administered Amount	R	R	If administered amount is not recorded, use 999.
7		CE	[0..1]	UCUM	Administered Units	C(R/X)	C(R/X)	If previous field is populated by any value except 999, it is required.
8		CE	[0..1]		Administered Dosage Form	O	X	
9		CE	[0..*]	NIP 0001	Administration Notes	C(R/O)	C(R/O)	The primary use of this field is to convey if this immunization record is based on a historical record or was given by the provider recording the immunization. All systems should be able to support this use. Other uses of this field are permitted, but need to be specified locally.

10		XCN	[0..1]		Administering Provider	RE	RE	This is the person who gave the administration or the vaccinator. It is not the ordering clinician.
11		LA2	[0..1]		Administered-at Location	RE	RE	The Facility value will be sent in the first subcomponent of component 4.
12	20	ST	[0..1]		Administered Per (Time Unit)	O	X	
13	20	NM	[0..1]		Administered Strength	O	X	
14		CE	[0..1]		Administered Strength Units	O	X	
15	20	ST	[0..*]		Substance Lot Number	RE	C(R/O)	
16		TS	[0..1]		Substance Expiration Date	CE	C(RE/O)	If the lot number is populated, this field should be valued.
17		CE	[0..*]	0227	Substance Manufacturer Name	RE	C(R/O)	
18		CE	[0..*]	NIP002	Substance/Treatment Refusal Reason	C	C(R/X)	If the Completion status is RE, then this shall be populated
19		CE	[0..1]		Indication	O	X	
20	2	ID	[0..1]	0322	Completion Status	RE	RE	If this field is not populated, it is assumed to be CP or complete. If the Refusal reason is populated, this field shall be set to RE.
21	2	ID	[0..1]	0323	Action Code - RXA	RE	RE	
22		TS	[0..1]		System Entry Date/Time	O	X	

23	5	NM	[0..1]		Administered Drug Strength Volume	O	X	
24		CWE	[0..1]		Administered Drug Strength Volume Units	O	X	
25		CWE	[0..1]		Administered Barcode Identifier	O	X	
26	1	ID	[0..1]	0480	Pharmacy Order Type	O	X	

RXA Field Definitions

RXA-1 Give Sub-ID Counter

Definition: Constrain to 0 (zero).

RXA|0|

Inbound –

Populate with "0". If other values are sent or field is empty, NCIR defaults to "0".

Outbound –

Sends out "0".

RXA-2 Administration Sub-ID Counter

Definition: This field is used to track multiple RXA under an ORC. Since each ORC has only one RXA in immunization messages, constrain to 1.

RXA|0|1|

Inbound –

Populate with "1". If other values are sent or field is empty, NCIR defaults to "1".

Outbound –

Sends out "1".

RXA-3 Date/Time Start of Administration

Definition: This is a required field. Begin Date the vaccine was given, or refusal date. NCIR ignores any time component.

RXA|0|1|**20121219|**

Inbound –

Send dose administration date.

If vaccination/refusal date is before DOB, an error message will be sent out and the segment will be ignored.

If vaccination/refusal date is after death date, an error message will be sent out and the segment will be ignored.

If incoming dose/refusal date is before both incoming DOB and existing DOB, an error message will be sent out and the segment will be ignored.

If a historical dose with estimated dose date, populate RXA-20 with DE to indicate estimated date in RXA-3

Outbound –

Vaccination/refusal date. If a historical dose with estimated dose date, populate RXA-20 with DE to indicate estimated date in RXA-3

RXA-4 Date/Time End of Administration

Definition: This is a required field. End Date the vaccine was given. (e.g., Same value as RXA-3).

RXA|0|1|20121219|**20121219**|

RXA-5 Administered Code

Definition: This field identifies the vaccine administered/offered. See Appendix B for a cross-reference table of RXA-5 code values.

Example: Administered dose (inventory dose) requires a Vaccine Trade Name OR Package or Unit National Drug Code (NDC) in either triplet, with or without an alternate value, in order to deduct from inventory.

|110^DTaP/Polio/Hep B^CVX^PEDIARIX^PEDIARIX^VTN|

|03^MMR^CVX^MMR II^MMR II^VTN|

|48^Hib-PRP-T^CVX^49281-0545-05^Acthib^NDC|

|10^Polio-Inject^CVX^49281-0860-88^IPOL^NDC|

Inbound –

Either triplet accepts CVX, CPT, NDC, or Vaccine Trade Name code.

For an administered dose (dose administered in your organization), Package or Unit NDC OR Vaccine Trade Name code (VTN) are required. Refer to Appendix to get a list of Package and Unit NDC values, and Vaccine Trade Names.

For a historical dose, CVX, CPT, NDC or VTN are accepted alone or in a valid combination. The second triplet is optional.

The segment will be rejected and an error message sent out if:

- 1) The value in RXA-5 is invalid (e.g. not a valid CVX code or NDC/VTN code missing for inventory/non-deducting doses): “RXA-5: Administered code invalid or missing.”
- 2) Value in first triplet does not correspond to value in the second triplet: “RXA-5: Administered code invalid or missing.”

3) In cases where a client has no dose history, but does have a client comment (i.e., Allergy), use the following: Client comments can be sent without a dose like the following example where 'CCYYMMDD' represent the current date:

RXA|0|1|CCYYMMDD| CCYYMMDD |998^No Vaccine Administered^CVX|999|||^No vaccine Administered^^^
If RXA-5.1 is 998, RXA-6 Administered Amount shall be 999. Else a warning will be returned.

Refer to Appendix C for further guidance on submitting vaccine deferrals.

Outbound –

For administered dose (state or privately purchased), the field will contain CVX code in first triplet and C4 (CPT) code or Package NDC in second triplet. The second triplet option is established as part of Data Exchange setup.

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^90713^Polio injectable^C4|0.5|ML^MILLILITERS^UCUM||00^^^^|
RXA|0|1|20160512|20160512|48^Hib-PRP-T^CVX^49281-0545-05^^NDC|0.5|ML^MILLILITERS^UCUM||00^^^^|

For historical/non-deducting doses, this field will send out CVX code in the first triplet. The second triplet may be C4 or Vaccine Group code. NCIR will no longer send out VGC in RXA-5

RXA|0|1|20100312|20100312|120^Dtap-Hib-IPV^CVX^90698^Dtap-Hib-IPV^C4|999|||01^ ^^^|
RXA|0|1|20090414|20090414|107^DTaP, unspecified formulation^CVX^|0.5|ML^MILLILITERS^UCUM||01^^^^|

If CVX is unknown for historical doses, the first triplet will be blank

For refusal and religious exemptions, the field indicates the code of vaccine or vaccine group: Refer to appendix for vaccine group codes.

RXA|0|1|20120828||03^MMR^CVX|999|||||||00^PARENTAL REFUSAL^NIP002^^||RE|||||
RXA|0|1|20120828||03^MMR^CVX|999|||||||01^RELIGIOUS EXEMPTION^NIP002^^||RE|||||

RXA-6 Administered Amount

Definition: Administered Amount; required field.

Examples:

Administered Dose (inventory dose) :

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|

Historical, parent refusal or religious exemptions:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999|

Inbound –

For administered dose, provide the administered amount. For historical, parent refusals, and religious exemptions provide value "999."

If historical, refusals, or religious exemptions have a value different than "999" or missing, a warning message is returned and default to "999"

When RXA-5.1 Administered Code is CVX 998 (No vaccine administered), Administered Amount shall be 999.

Outbound –

For historical doses, parent refusals, and religious exemptions, NCIR will send out a value of "999".

When RXA-5.1 Administered Code is CVX 998 (No vaccine administered), Administered Amount shall be 999.

For inventory and non-deducting doses, NCIR will send out existing dose amount in the NCIR

RXA-7 Administered units

Definition: Administered Units: required field.

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|**ML^MILLILITERS^UCUM|**

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999||

Inbound –

Provide the administered units (ml or caps) for administered dose and leave empty for historical dose, followed by a description and coding system "UCUM". NCIR will ignore the field if anything is sent while RXA-6 has a value of 999.

Outbound –

For historical doses, NCIR will leave this field blank. For inventory dose, this field will be ml or caps, followed by a description and coding system of “UCUM”. Non-deducting will behave as inventory doses and send what exists in UI.

Example: Historical dose:

RXA|0|1|20121219|20121219|03^MMR^CVX^90707^MMR^C4|999||

Example: Inventory dose:

RXA|0|1|20121219|20121219|03^MMR^CVX^90707^MMR^C4|0.5|**ML^MILLILITERS^UCUM**|

RXA-9 Administration Notes

Definition: NCIR will recognize 00 to indicate Administered Vaccine, 01 to indicate Historical Record.

Examples:

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^90713^Polio injectable^C4|0.5|**ML^MILLILITERS^UCUM||00^New Immunization Record^NIP001**|

RXA|0|1|20160512|20160512|48^Hib-PRP-T^CVX^^|999|||**01^Historical Information – Source unspecified^NIP001**|

Inbound –

For administered vaccine, send “00” and for historical dose, send “01”, followed by a description and coding system “NIP001”. If other than “01” or “00” sent, an error message will be generated: "RXA-9: Administration Notes invalid or missing."

Outbound –

NCIR returns “00” for inventory and non-deducting dose and “01” for historical dose. Coding system “NIP001” is sent in component 3. RXA-9 will be empty if RXA-21 Action Code is not CP/PA.

RXA-10 Administering Provider

Definition: Identifies the name of the administering clinician.

|^Clinician Last^Clinician First^Clinician Middle~~~~~Name type code|

Inbound –

Ensure that the list of ordering providers set up in the NCIR and the EHR are up to date before sending data to the NCIR. NCIR on request can provide you a list of ordering providers set up for your organization in the NCIR.

1. For an administered dose, populate this field with an administering provider in the NCIR.
2. If historical dose, value is ignored.
3. If it is an inventory dose and RXA-10 is missing, return a warning message.
4. If value provided matches an existing administering provider in the NCIR, the same is stored in the NCIR. If name does not match a value in the NCIR, default to Unknown in NCIR.
5. Submit Name Type Code L.
(e.g. ^Last Name^First Name~~~~~Name type code)

Outbound –

If historical dose, NCIR will not populate. For non-deducting or inventory dose, NCIR will send the Administered By value if available.

(e.g. ^Last Name^First Name~~~~~Name type code)

RXA-11 Administered-at Location

Definition: NCIR will use this field to identify the facility where the vaccine was administered.

Example 1 – Inventory: |^^SITE-99999~~~~~|

Example 2 – Historical: |^^PROVIDING ORGANIZATION~~~~~|

Inbound –

When the dose is historical, the Administered-at Location is stored as free text without any validation.

For an administered (inventory) dose, the location is specified in the fourth component (facility) of RXA-11 field. Within the fourth component, the first sub-component is used to identify the location. For an inventory dose, provide the string “SITE-” followed by site id where the dose was administered. Refer to example 1 above for inventory dose. NCIR will provide the site id's in your organization as part of the onboarding process.

Outbound –

NCIR will send out the provider site name and site id where the dose was administered. This value is populated in the first subcomponent of component 4 (Facility) of RXA-11. The provider site name is followed by a hyphen, “-“and the Site Id for Inventory doses. For historical doses, the Provider name text will be sent, or this field may be left empty if value not available.

RXA-15 Substance Lot Number

Definition: Manufacturer's lot number for the vaccine. Required for inventory deduction. For historical doses, this field may be left blank.

Example:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|ML^MILLILITERS^UCUM||00^New Immunization^12345^Clinician Last^Clinician First^Clinician Middle^^^^^OE|^|^|SITE-1234|||testlot1|

Inbound –

For historical doses/refusals, this field may be left blank. This field should be populated with lot # for the administered vaccine.

Outbound –

For historical doses/refusals, this field is left blank and lot number is populated for administered vaccine.

RXA-16 Substance Expiration Date

Definition: Identifies the date the lot expires in the YYYYMMDD format. For historical doses, this field may be left blank.

e.g. |testlot1|20151226|

Inbound –

For historical doses/refusals, this field may be left blank. For administered dose, provide the expiration date of the lot.

Outbound –

NCIR will send out the lot expiration date for administered dose. For historical doses/refusals, this field will be left blank.

RXA-17 Substance Manufacturer Name

Definition: Vaccine manufacturer from Table 0227. RXA-17 is required for inventory deduction.

e.g. |testlot1|20151226|MSD^Merck^MVX|

Inbound –

For historical doses/refusals, this field may be left blank. For administered dose, provide the vaccine manufacturer code. Refer to Appendix for list of values.

Outbound –

For historical doses/refusals, this field is left blank. For administered dose, vaccine manufacturer code is returned.

RXA-18 Substance/Treatment Refusal Reason

Definition: When applicable, this field displays the reason the patient refused the vaccine. See table NIP002. Any entry in this field indicates that the patient did not take the substance. The vaccine that was offered should be recorded in RXA-5. Do not record contraindications, immunities or reactions in this field or if the dose was administered to the client. NCIR accepts two types of refusals, namely parental refusal and other is religious exemption.

Examples:

RXA|0|999|20110425|20110425|03^MMR^CVX^^|999|||||||**00^PARENTAL REFUSAL^NIP002|RE|A|20121128113754**

RXA|0|999|20110425|20110425|28^DT^CVX^^|999|||||||**01^RELIGIOUS EXEMPTION^NIP002|RE|A|20121128113754.**

RXA-20 Completion Status

Definition: This field records the value PA for doses which are partially administered. If this field is not populated, it is assumed to be CP or complete. Populated with RE if Refusal Reason field is populated.

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^IPOL^VTN|0.5|ML^MILLILITERS^UCUM||00^New^^^|12345^Clinician Last^Clinician First^Clinician Middle |^^^SITE-21959^|||Z1234A|20200101|PMC^PMC^MVX^^|||**CP**

Inbound –

If dose was successfully administered, use CP. Other values accepted are: PA (Partially Accepted), CP (Completed), RE (Refused), NA (Not Administered), and DE (Date estimated). If blank, NCIR will default to CP.

If RXA-20 is not CP or PA, RXA-9 shall be blank. Else a warning will be returned.

Outbound –

NCIR will populate with PA, CP, RE, NA or DE.

RXA-21 Action Code – RXA

Definition: This field indicates the action expected by the sending system. It can facilitate update or deletion of immunization records.

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella Live^VTN|999|ML^MILLILITERS^UCUM||01^Historical Immunization^12345^Clinician Last^Clinician First^Clinician Middle |||||testlot1|20151226|MSD|||CP|A

Inbound –

1. For both add or update of record, specify A for add. NCIR will add or update depending on whether record exists or not.
 2. To delete an existing immunization in NCIR specify a value of “D”. In addition to requiring that the owning org of the incoming transaction own the existing immunization, NCIR limits that no more than 5% of all incoming immunizations can be flagged as delete and no more than 50 total per batch job. Maximum of 50 deletes are allowed per organization through web services. Not processed after the limit.
 3. Delete for historical doses does not require the owning requirement
 4. If delete of immunization through Data exchange is desired, request that delete feature be turned on during onboarding process.
- RXA-21 is populated when RXA-5 is not 998. Else a warning will be returned.

Outbound –

NCIR will populate this field when RXA-5.1 Administered Code is not “998”.

RXA|0|1|20170306||75^Vaccinia^CVX^^|999|||||||01^RELIGIOUS EXEMPTION^NIP002^^||RE|A||||

RXR-- Pharmacy/Treatment Route Segment

The Pharmacy/Treatment Route segment contains the alternative combination of route, site, administration device, and administration method that are prescribed as they apply to a particular order.

Table 5-11 Pharmacy/Treatment Route (RXR)

SEQ	LEN	Data Type	CDC IG Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIT Usage	Constraint
1		CE	[1..1]	0162	Route	R	R	
2		CWE	[0..1]	0163	Administration Site	RE	RE	
3		CE	[0..1]	0164	Administration Device	O	X	
4		CE	[0..1]	0165	Administration Method	O	X	
5		CE	[0..1]		Routing Instruction	O	X	
6		CWE	[0..1]	0495	Administration Site Modifier	O	X	

Example:

RXR| IM^Intramuscular^HL70162|LA^Left Arm^HL70163|||

RXR Field Definitions

RXR-1 Route

Definition: This field is the route of administration. Refer to User-Defined Table 0162 - Route of Administration listing of NCIT valid values.

|C38305^TRANSDERMAL^NCIT |

Inbound –

Acceptable Administration Site values are listed in Table 0162 listing of NCIT values. Use coding system NCIT. Alternate HL70162 values may be sent in triplet 2.

For historical dose, field is not applicable.

For inventory (administered) dose, provide the route of administration in this field. If incoming inventory immunization contains a missing Route or invalid

- Return a Warning response: “RXR-1: Route missing or invalid”

Outbound –

Two triplets will be sent outbound for RXR-1 route. The first triplet will have NCIT code, NCIT code description and coding system “NCIT” while the second triplet will have HL70162 RXR-1 Route values as Alternate values. For non-deducting/inventory doses values: See Table NCIT..

RXR-2 Administration Site

Definition: This field contains the site of the administration route. Acceptable Administration Site values are listed in Table 0163.

Example: |LA^Left Arm^HL70163|

Inbound –

Acceptable Administration Site values are listed in Table 0163

For historical dose, field is not applicable.

For administered (inventory) dose, provide administration site from Table 0163 in Appendix.

1. If incoming immunization has RXR-1 Route value “PO” (by mouth), then RXR-2 may be blank. NCIR will automatically populate the value “mouth” on the immunization site.
2. If incoming immunization contains a missing Administration Site
 - 1.1 Return a Warning response that a valid Administration Site was not provided

-
- 1.2 Process Immunization as inventory
 - 1.3 Record Administration Site “Unknown” with the immunization
- 3. If incoming immunization contains an invalid Administration Site
 - 2.1 Return an Error response that a valid Administration Site was not provided
 - 2.2 Process Immunization as inventory
 - 2.3 Record Administration Site “Unknown” with the immunization

Outbound –

For non-deducting/inventory doses values: See Table 0163

6. Messages for Transmitting Immunization Information

Note: This chapter specifies NCIR message specifications and points out differences from CDC IG. Remember that it is acceptable to further constrain the CDC IG, but not acceptable to loosen the CDC IG.

The CDC IG contains no local business rules. Local business rules can be vitally important to a successful interface between an external system and your specific IIS.

This chapter describes each of the messages built from the segments described in Chapter 5, Segments and Message Details. The Segments are built using the Data Types specified in Chapter 4. Readers are referred to these chapters for specifics on these components.

Send Immunization History--VXU

Systems may send unsolicited immunization records using a VXU. This may be a record that is new to NCIR or may be an update to an existing record. See Appendix D for example messages that illustrate the processing of this message.

The changes made by NCIR are defined below:

- 1) Local Business rules
 - a. NCIR had some local business rules which are technically outside of HL7 but add value for the sending system to better understand how to exchange data with NCIR.

NCIR applies the following local business rules to VXU messages:

-
- 1) Any vaccines with a vaccination date prior to the patient's birth date will be rejected.
 - 2) Any vaccines with a vaccination date after the patient's death date will be rejected.
 - 3) Any vaccines with a vaccination date into the future will be rejected as invalid and will not be processed.
 - 4) If Incoming birth date is greater than an existing immunization for the client, the incoming client will be pended.
 - 5) An organization defined as a Vendor can submit files for organizations defined as their Client. An organization may not submit data for any other organization if that other organization is not defined as a client to their organization. HIE may submit data for any organization.
 - 6) If there is no version number found in the MSH segment, or the value is not 2.5.1, the file will not be processed. Error message will be sent.
 - 7) If death date is sent but the Patient Indicator in PID-30 is not set to Y, default the Patient Death indicator to Y, reflect the correct status of the patient in all organizations and send a warning message.

A warning message will be sent out if OBX-5 value sets the coverage violation indicator: "OBX-05: Financial Class: A state supplied dose was provided when a private dose should have been provided." This occurs when publicly funded vaccine lot is administered to a patient who does not have a corresponding eligibility code.

9. *If Observation date (OBX-14) provided in OBX segment is before birth date, the transaction is rejected.*

Table 6-1-Supported Messages

Message	Purpose	Related Messages	Associated Profiles	NCIR Supported
Z22-VXU	Send Immunization History	Z23-ACK		Yes
Z23-ACK	Send Message Acknowledgement	Z22-VXU, ADT, Z34-QBP, Z44-QBP		Yes

Send Immunization History--VXU

Systems may send NCIR unsolicited immunization records using a VXU. This may be a record that is new to NCIR or may be an update to an existing record. The following table lists the segments that are part of a VXU.

Table 6-2 VXU Segment Usage is written in the context of a single transaction not a file of transactions.

Table 6-2--VXU Segment Usage

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
MSH	[1..1]	[1..1]	R	R	
SFT	[0..*]		O	X	
PID	[1..1]	[1..1]	R	R	
PD1	[0..1]	[0..1]	RE	RE	NCIR needs PD1 to determine status of the client.
NK1	[0..*]	[0..4]	RE	RE	
PV1	[0..1]	[0..1]	RE	X	NCIR requires Eligibility information be sent in the OBX segment. The PV1 is ignored if sent.
PV2	[0..1]		O	X	
GT1	[0..*]		O	X	
Begin Insurance Group	[0..*]		O	X	
IN1	[0..1]		O	X	
IN2	[0..1]		O	X	
IN3	[0..1]		O	X	
End Insurance Group					
Begin Order group	[0..*]	[1..*]	RE	R	NCIR requires at least one RXA per VXU.

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
ORC	[1..1]	[1..1]	R	R	One per RXA
TQ1	[0..1]		O	X	
TQ2	[0..1]		O	X	
RXA	[1..1]	[1..1]	R	R	
RXR	[0..1]	[0..1]	RE	RE	
<i>Begin Observation Group</i>	[0..*]	[0..*]	RE	RE	
OBX	[0..*]	[0..*]	R	R	
NTE	[0..1]		RE	X	
<i>End Observation Group</i>					
<i>End Order Group</i>					

Acknowledging a Message—Z23-ACK

The Z23-ACK returns an acknowledgement to the sending system. This may indicate errors in processing.

Table 6-3 Message Acknowledgement Segment (Z23-ACK)

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0.. 1]	[0.. 1]	O	X	NCIR will not return this segment on outbound file.
BHS	[0.. 1]	[0.. 1]	O	X	NCIR will not return this segment on outbound file.
MSH	[1..1]	[1..1]	R	R	
SFT	[0..1}		O	X	
MSA	[1..1]	[1..1]	R	R	
ERR	[0..*]	[0..*]	RE	C	(Include if any errors)
<i>End Order Group</i>					
BTS	[0.. 1]	[0.. 1]	O	X	NCIR will not return this segment on outbound file. (if txn starts with BHS)
FTS	[0.. 1]	[0.. 1]	O	X	NCIR will not return this segment on outbound file. (if txn starts with BHS)

Note: For the general acknowledgment (ACK) message, the value of MSH-9-2-Trigger event is equal to the value of MSH-9-2-Trigger event in the message being acknowledged. The value of MSH-9-3-Message structure for the general acknowledgment message is always ACK.

Appendix A: Code Tables

HL7 Values

Appendix Type	Table	Name	Value	Description
HL7	0001	Sex		
	0001		F	Female
	0001		M	Male
	0001		U	Unknown
HL7	0003	Event Type		
	0003		A31	ADT/ACK - Update patient information
	0003		V04	VXU - Unsolicited vaccination record update
		Immunization Profile Identifiers		
HL7	CDCPHINVS		Z31	Return Candidate Clients
	CDCPHINVS		Z32	Return Immunization History
	CDCPHINVS		Z33	Return acknowledged
	CDCPHINVS		Z34	Request Immunization History
	CDCPHINVS		Z44	Request Evaluated History and Forecast
	CDCPHINVS		Z42	Return Evaluated History and Forecast
User	0005	Race		
	CDCREC		1002-5	American Indian or Alaska Native
	CDCREC		2028-9	Asian
	CDCREC		2076-8	Native Hawaiian or Other Pacific Islander
	CDCREC		2054-5	Black or African-American
	CDCREC		2106-3	Caucasian
	CDCREC		2131-1	Other
	CDCREC		<empty field>	Unknown
HL7	0008	Acknowledgment Code		
	0008		AA	Application Accept
	0008		AE	Application Error
	0008		AR	Application Reject
User	0063	Relationship		
	0063		BRO	Brother
	0063		CHD	Child
	0063		DOM	Life Partner
	0063		EMC	Emergency Contact
	0063		EXF	Extended Family
	0063		FCH	Foster Child
	0063		FTH	Father
	0063		GRD	Guardian
	0063		GRP	Grandparent
	0063		MTH	Mother
	0063		OAD	Other Adult
	0063		OTH	Other
	0063		PAR	Parent
	0063		SCH	Stepchild

Appendix Type	Table	Name	Value	Description
	0063		SEL	Self
	0063		SIB	Sibling
	0063		SIS	Sister
	0063		SPO	Spouse
	0063		UNK	Unknown
HL7	0064	Eligibility Code	NCA03	North Carolina Health Choice
	0064		NCA01	Insured
	0064		NCA02	Underinsured (No FQHC/RHC)
	0064		V02	Medicaid
	0064		V03	Not Insured
	0064		V04	American Indian/Alaskan Native
	0064		NCA04	Title X Uninsured Unaccompanied Minor
HL7	0076	Message Type		
	0076		ACK	General acknowledgment message
	0076		ADT	ADT message
	0076		QBP	Query by Parameter
	0076		RSP	Response to Query by parameter
	0076		VXU	Unsolicited vaccination record update
HL7	0085	Observation result status codes		
	0085		F	Final
HL7	0103	Processing ID		
	0103		P	Production
HL7	0104	Version ID		
	0104		2.5.1	Release 2.5.1 April 2007
HL7	0119	Order Control		
			RE	Observations to follow
HL7	0125	Value Type		
	0125		CE	Coded Entry
	0125		NM	Number
	0125		DT	Date
	0125		TS	Time Stamp
HL7	0136	Yes/No Indicator		
	0136		Y	Yes
	0136		N	No
HL7	0155	Accept/Application Acknowledgment Conditions		
	0155		AL	Always
	0155		NE	Never
	0155		ER	Error/reject conditions only
	0155		SU	Successful completion only
HL7	0162	Route of Administration		
	0162		ID	Intradermal
	0162		IM	Intramuscular
	0162		NS	Nasal
	0162		IV	Intravenous
	0162		OTH	Other
	0162		PO	Oral

Appendix Type	Table	Name	Value	Description
	0162		SC	Subcutaneous
	0162		TD	Transdermal
NCIT	NCIT	Route of Administration		
			C38238	Intradermal
			C28161	Intramuscular
			C38284	Nasal
			C38276	Intravenous
			C38288	Oral
			C38299	Subcutaneous
			C38305	Transdermal
HL7	0163	Administrative Site		
	0163		LT	Left Thigh
	0163		LA	Left Arm
	0163		LD	Left Deltoid
	0163		LG	Left Gluteous Medius
	0163		LVL	Left Vastus Lateralis
	0163		LLFA	Left Lower Forearm
	0163		RA	Right Arm
	0163		RT	Right Thigh
	0163		RVL	Right Vastus Lateralis
	0163		RG	Right Gluteous Medius
	0163		RD	Right Deltoid
	0163		RLFA	Right Lower Forearm
	0163		BN	Bilateral Nares
User	0189	Ethnic Group		
	CDCREC		2135-2	Hispanic
	CDCREC		2186-5	Not Hispanic or Latino
	CDCREC		<empty field>	Unknown
HL7	0190	Address Type		
	0190		M	Mailing
HL7	0200	Name type		
	0200		L	Legal name
HL7	0200		M	Maiden name
	0201	Telecommunication use code		
HL7	0201		PRN	Primary residence number
	0203	Identifier Type		
	0203		PI	Patient internal identifier
	0203		SR	State registry ID
	0203		PT	Group Chart Number
User	0203		MR	Medical record number
	0215	Publicity Code		
	0215		01	No reminder/recall
	0215		02	Yes reminder/recall – any method

Appendix Type	Table	Name	Value	Description
HL7	0227	Manufacturers of vaccines (code = MVX)		
	0227		AB	Abbott Laboratories
	0227		AD	Adams Laboratories
	0227		ALP	Alpha Therapeutic Corporation
	0227		AP	Aventis Pasteur (Inactive now mapped to PMC and values are sent out as PMC)
	0227		AR	Armour (Inactive – now mapped to CEN and values are sent out as CEN)
	0227		AVB	Aventis Behring LLC (Inactive – now mapped to CSL and values are sent out as CSL)
	0227		AVI	Aviron
	0227		BA	Baxter (Inactive – now mapped to BAH and values are sent out as BAH)
	0227		BAH	Baxter Healthcare Corporation
	0227		BAY	Bayer
	0227		BP	Berna (Inactive – now mapped to BPC and values are sent out as BPC)
	0227		BPC	Berna Products Corporation
	0227		CEN	Centeon L.L.C. (Inactive – now mapped to AVB and values are sent out as AVB)
	0227		CHI	Chiron Corporation (Inactive – now mapped to NOV and values are sent out as NOV)
	0227		CNJ	Cangene Corporation
	0227		CON	Connaught (Inactive – now mapped to PMC and values are sent out as PMC)
	0227		CSL	CSL Biotherapies
	0227		DVC	DynPort Vaccine Company, LLC
	0227		DVX	Dynavax, Inc.
	0227		EVN	Evans (Inactive – now mapped to WJ and values are sent out as PWJ)
	0227		GEO	GeoVax Labs, Inc
	0227		GRE	Greer Laboratories
	0227		IAG	Immuno International AG (Inactive – now mapped to BAH and values are sent out as BAH)
	0227		IDB	ID Biomedical
	0227		IM	Merieux (Inactive – now mapped to PMC and values are sent out as PMC)
	0227		INT	Intercell Biomedical
	0227		IUS	Immuno-US
	0227		JPN	The Research foundation for Microbial Diseases of Osaka U.
	0227		KGC	Korea Green Cross
	0227		LED	Lederle (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		MA	Massachusetts Public Health (Inactive – now mapped to MBL and values are sent out as MBL)
	0227		MBL	Massachusetts Biologic Laboratories
	0227		MED	MedImmune, Inc.
	0227		MIL	Miles (Inactive – now mapped to BAY and values are sent out as BAY)
	0227		MIP	BioPort Corporation
	0227		MSD	Merck & Co., Inc.

Appendix Type	Table	Name	Value	Description
	0227		NAB	North American Biologicals, Inc.
	0227		NAV	North American Vaccine (Inactive – now mapped to BAH and values are sent out as BAH)
	0227		NVX	Novavax, Inc
	0227		NYB	New York Blood Center
	0227		NOV	Novartis Pharmaceutical Corporation
	0227		OTC	Organon Teknika
	0227		ORT	Ortho-Clinical Diagnostics
	0227		PAX	PaxVax
	0227		PD	Parkdale Pharmaceuticals (formerly Parke Davis)
	0227		PFR	Pfizer, Inc.
	0227		PMC	Sanofi Pasteur (formerly Aventis Pasteur, Pasteur Merieux Connaught)
	0227		PRX	Praxis Biologics (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		PSC	Protein Sciences Corporation
	0227		PWJ	Powderject Pharmaceutical (Inactive – now mapped to NOV and values are sent out as NOV)
	0227		SA	United States Army Medical Research (Inactive – now mapped to USA and values are sent out as USA)
	0227		SCL	Biocene Sclavo
	0227		SEQ	Seqirus
	0227		SKB	Glaxo SmithKline
	0227		SI	Swiss Serum and Vaccine Inst. (Inactive – now mapped to BPC and values are sent out as BPC)
	0227		SOL	Solvay Pharmaceuticals
	0227		TAL	Talecris Biotherapeutics (includes Bayer Biologicals)
	0227		USA	United States Army Medical Research
	0227		VAL	Valneva
	0227		WA	Wyeth-Ayerst (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		WAL	Wyeth-Ayerst
	0227		VXG	VaxGen
	0227		ZLB	ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Company)
	0227		OTH	Other
	0227		UNK	Unknown manufacturer
User	0289	County (North Carolina only)		
	0289		NC001 or 37001	Alamance
	0289		NC003 or 37003	Alexander
	0289		NC005 or 37005	Alleghany
	0289		NC007 or 37007	Anson
	0289		NC009 or 37009	Ashe
	0289		NC011 or 37011	Avery
	0289		NC013 or 37013	Beaufort
	0289		NC015 or 37015	Bertie
	0289		NC017 or 37017	Bladen
	0289		NC019 or 37019	Brunswick
	0289		NC021 or 37021	Buncombe
	0289		NC023 or 37023	Burke

Appendix Type	Table	Name	Value	Description
	0289		NC025 or 37025	Cabarrus
	0289		NC027 or 37027	Caldwell
	0289		NC029 or 37029	Camden
	0289		NC031 or 37031	Carteret
	0289		NC033 or 37033	Caswell
	0289		NC035 or 37035	Catawba
	0289		NC037 or 37037	Chatham
	0289		NC039 or 37039	Cherokee
	0289		NC041 or 37041	Chowan
	0289		NC043 or 37043	Clay
	0289		NC045 or 37045	Cleveland
	0289		NC047 or 37047	Columbus
	0289		NC049 or 37049	Craven
	0289		NC051 or 37051	Cumberland
	0289		NC053 or 37053	Currituck
	0289		NC055 or 37055	Dare
	0289		NC057 or 37057	Davidson
	0289		NC059 or 37059	Davie
	0289		NC061 or 37061	Duplin
	0289		NC063 or 37063	Durham
	0289		NC065 or 37065	Edgecombe
	0289		NC067 or 37067	Forsyth
	0289		NC069 or 37069	Franklin
	0289		NC071 or 37071	Gaston
	0289		NC073 or 37073	Gates
	0289		NC075 or 37075	Graham
	0289		NC077 or 37077	Granville
	0289		NC079 or 37079	Greene
	0289		NC081 or 37081	Guilford
	0289		NC083 or 37083	Halifax
	0289		NC085 or 37085	Harnett
	0289		NC087 or 37087	Haywood
	0289		NC089 or 37089	Henderson
	0289		NC091 or 37091	Hertford
	0289		NC093 or 37093	Hoke
	0289		NC095 or 37095	Hyde
	0289		NC097 or 37097	Iredell
	0289		NC099 or 37099	Jackson
	0289		NC101 or 37101	Johnston
	0289		NC103 or 37103	Jones
	0289		NC105 or 37105	Lee
	0289		NC107 or 37107	Lenoir
	0289		NC109 or 37109	Lincoln
	0289		NC111 or 37111	McDowell
	0289		NC113 or 37113	Macon
	0289		NC115 or 37115	Madison
	0289		NC117 or 37117	Martin

Appendix Type	Table	Name	Value	Description
	0289		NC119 or 37119	Mecklenburg
	0289		NC121 or 37121	Mitchell
	0289		NC123 or 37123	Montgomery
	0289		NC125 or 37125	Moore
	0289		NC127 or 37127	Nash
	0289		NC129 or 37129	New Hanover
	0289		NC131 or 37131	Northampton
	0289		NC133 or 37133	Onslow
	0289		NC135 or 37135	Orange
	0289		NC137 or 37137	Pamlico
	0289		NC139 or 37139	Pasquotank
	0289		NC141 or 37141	Pender
	0289		NC143 or 37143	Perquimans
	0289		NC145 or 37145	Person
	0289		NC147 or 37147	Pitt
	0289		NC149 or 37149	Polk
	0289		NC151 or 37151	Randolph
	0289		NC153 or 37153	Richmond
	0289		NC155 or 37155	Robeson
	0289		NC157 or 37157	Rockingham
	0289		NC159 or 37159	Rowan
	0289		NC161 or 37161	Rutherford
	0289		NC163 or 37163	Sampson
	0289		NC165 or 37165	Scotland
	0289		NC167 or 37167	Stanly
	0289		NC169 or 37169	Stokes
	0289		NC171 or 37171	Surry
	0289		NC173 or 37173	Swain
	0289		NC175 or 37175	Transylvania
	0289		NC177 or 37177	Tyrrell
	0289		NC179 or 37179	Union
	0289		NC181 or 37181	Vance
	0289		NC183 or 37183	Wake
	0289		NC185 or 37185	Warren
	0289		NC187 or 37187	Washington
	0289		NC189 or 37189	Watauga
	0289		NC191 or 37191	Wayne
	0289		NC193 or 37193	Wilkes
	0289		NC195 or 37195	Wilson
	0289		NC197 or 37197	Yadkin
	0289		NC199 or 37199	Yancey
	0289		ZZ998 or 37998	Unknown
	0289		ZZ999 or 37999	Out of State
HL7	0292	Vaccines Administered (CVX Codes)		
	0292		54	Adeno T4

Appendix Type	Table	Name	Value	Description
	0292		55	Adeno T7
	0292		82	Adeno, unspecified formulation
	0292		24	Anthrax
	0292		19	BCG
	0292		26	Cholera
	0292		28	DT-Peds
	0292		20	DTaP
	0292		106	DTaP, 5 pertussis antigen
	0292		110	DTaP-HepB-Polio
	0292		50	DTaP-Hib
	0292		120	DTap-Hib-IPV
	0292		130	DTap-IPV
	0292		107	DTaP, unspecified formulation
	0292		01	DTP
	0292		22	DTP-Hib
	0292		111	FLU-Nasal
	0292		16	FLU whole cell
	0292		85	Hep A, unspecified formulation
	0292		45	Hep B, unspecified formulation
	0292		52	HepA-Adult
	0292		104	HepA-HepB Adult
	0292		83	HepA-Ped 2 dose
	0292		84	HepA-Peds
	0292		43	HepB-Adult
	0292		189	HepB-CpG
	0292		44	HepB-Dialysis
	0292		08	HepB-Peds
	0292		51	HepB-Hib
	0292		17	Hib, unspecified formulation
	0292		47	Hib-HbOC
	0292		148	Hib-MenCY-TT
	0292		49	Hib-OMP
	0292		46	Hib-PRP-D
	0292		48	Hib-PRP-T
	0292		165	HPV9
	0292		118	HPV, Bivalent
	0292		62	HPV, quadrivalent
	0292		137	HPV, unspecified formulation
	0292		151	Influenza nasal, unspecified formulation
	0292		135	Influenza, High-Dose Seasonal
	0292		186	Influenza, IIV4, IM, MDCK
	0292		171	Influenza, IIV4, IM, MDCK, pres-free
	0292		166	Influenza, intradermal, IIV4, pres-free
	0292		155	Influenza, recombinant, seasonal, IM, pf
	0292		185	Influenza, recombinant, IIV4, IM, p-free
	0292		158	Influenza, seasonal, IIV4 IM
	0292		161	Influenza, seasonal, IIV4, IM, pf, peds

Appendix Type	Table	Name	Value	Description
	0292		150	Influenza, seasonal, IIV4, IM, pres-free
	0292		141	Influenza, seasonal, injectable
	0292		144	Influenza, seasonal, intradermal, p-free
	0292		149	Influenza, seasonal, LAIV4, IN
	0292		153	Influenza, seasonal, MDCK, IM, pres-free
	0292		140	Influenza, seasonal, preservative free
	0292		168	Influenza, trivalent, adjuvanted
	0292		88	Influenza, unspecified formulation
	0292		134	Japanese Encephalitis IM
	0292		39	Japanese Encephalitis SC
	0292		129	Japanese Encephalitis, unspecified
	0292		66	Lyme
	0292		147	MCV4, unspecified formulation
	0292		05	Measles
	0292		04	Measles-Rubella
	0292		162	Meningococcal B, recombinant
	0292		163	Meningococcal B, OMV
	0292		164	Meningococcal B, unspecified formulation
	0292		103	Meningococcal C conjugate
	0292		136	Meningococcal conjugate MCV4O
	0292		114	Meningococcal conjugate MCV4P
	0292		32	Meningococcal Polysaccharide MPSV4
	0292		167	Meningococcal, unknown serogroup
	0292		108	Meningococcal, unspecified formulation
	0292		03	MMR
	0292		94	MMRV
	0292		07	Mumps
	0292		127	Novel Influenza-H1N1-09
	0292		128	Novel Influenza-H1N1-09 all formulations
	0292		125	Novel Influenza-H1N1-09, nasal
	0292		126	Novel Influenza-H1N1-09, preseve-free
	0292		11	Pertussis
	0292		23	Plague
	0292		133	Pneumococcal Conjugate 13
	0292		100	Pneumococcal Conjugate 7
	0292		33	Pneumococcal Polysaccharide 23
	0292		109	Pneumococcal, unspecified formulation
	0292		89	Polio, unspecified formulation
	0292		10	Polio-Inject
	0292		02	Polio-Oral
	0292		90	Rabies, unspecified formulation
	0292		40	Rabies-ID
	0292		18	Rabies-IM
	0292		116	Rotavirus pentavalent
	0292		119	Rotavirus, monovalent
	0292		74	Rotavirus, tetravalent
	0292		122	Rotavirus, unspecified formulation

Appendix Type	Table	Name	Value	Description
	0292		06	Rubella
	0292		38	Rubella-Mumps
	0292		75	Smallpox
	0292		138	Td (adult)
	0292		09	TD (adult), adsorbed
	0292		139	Td (adult), unspecified formulation
	0292		113	Td adult preservative free
	0292		115	Tdap
	0292		35	Tetanus
	0292		112	Tetanus toxoid, unspecified formulation
	0292		91	Typhoid, unspecified formulation
	0292		53	Typhoid-AKD
	0292		41	Typhoid-HP
	0292		25	Typhoid-Oral
	0292		101	Typhoid-ViCPs
	0292		105	Vaccinia (smallpox), diluted
	0292		21	Varicella
	0292		37	Yellow fever
	0292		187	Zoster recombinant
	0292		188	Zoster, unspecified formulation
	0292		121	Zoster vaccine, live
HL7	0296	Primary Language		
	0296		ENG	English
	0296		HMN	Hmong
	0296		SOM	Somali
	0296		SPA	Spanish
HL7	0322	Completion Status		
	0322		CP	Complete
	0322		RE	Refused
	0322		NA	Not Administered
	0322		PA	Partially Administered
	0322		DE	Date Estimated
HL7	0323	Action Code		
	0323		A	Add
	0323		D	Delete
HL7	0357	Message error status codes		
	0357		100	Segment sequence error
	0357		101	Required field missing
	0357		102	Data type error
	0357		103	Table value not found
	0357		200	Unsupported message type
	0357		201	Unsupported event code
	0357		202	Unsupported processing ID
	0357		203	Unsupported version ID
	0357		204	Unknown key identifier
	0357		205	Duplicate key identifier

Appendix Type	Table	Name	Value	Description
	0357		206	Application record locked
	0357		207	Application internal error
HL7	0363	Assigning Authority		
	0363		NCA	North Carolina Authority
HL7	0396	GDTI		
	CDCPHINVS			
	CDCPHINVS	07/14/2011	2530886983000111110714	Adenovirus VIS
	CDCPHINVS	06/11/2014	25308869830001111140611	Adenovirus VIS
	CDCPHINVS	03/10/2010	25308869830002811100310	Anthrax VIS
	CDCPHINVS	07/06/2017	253088698300031811170706	Anthrax VIS
	CDCPHINVS	03/21/2018	253088698300031811180321	Anthrax Vaccine VIS
	CDCPHINVS	7/6/2017	253088698300031811170706	Cholera Vaccine VIS
	CDCPHINVS	05/17/2007	25308869830003511070517	Diphtheria/Tetanus/Pertussis (DTaP) VIS
	CDCPHINVS	08/24/2018	25308869830003511180824	Diphtheria/Tetanus/Pertussis (DTaP) VIS
	CDCPHINVS	10/25/2011	25308869830004211111025	Hepatitis A VIS
	CDCPHINVS	07/20/2016	253088698300042111160720	Hepatitis A Vaccine VIS
	CDCPHINVS	02/02/2012	25308869830005911120202	Hepatitis B VIS
	CDCPHINVS	07/20/2016	25308869830005911160720	Hepatitis B Vaccine VIS
	CDCPHINVS	10/12/2018	25308869830005911181012	Hepatitis B Vaccine VIS
	CDCPHINVS	12/16/1998	25308869830006611981216	Haemophilus Influenzae type b VIS
	CDCPHINVS	02/04/2014	25308869830006611140204	Haemophilus Influenzae type b VIS
	CDCPHINVS	04/02/2015	25308869830006611150402	Haemophilus Influenzae type b VIS
	CDCPHINVS	05/03/2011	25308869830007311110503	Human papillomavirus Vaccine (Cervarix) VIS
	CDCPHINVS	02/22/2012	25308869830008011120222	Human papillomavirus Vaccine (Gardasil) VIS
	CDCPHINVS	05/17/2013	25308869830008011130517	Human papillomavirus Vaccine (Gardasil) VIS
	CDCPHINVS	03/31/2016	253088698300029511160331	HPV Vaccine (Gardasil-9) VIS
	CDCPHINVS	12/02/2016	253088698300029511161202	HPV Vaccine VIS
	CDCPHINVS	04/15/2015	253088698300029511150415	Human papillomavirus Vaccine, 9-valent (Gardasil 9) VIS
	CDCPHINVS	07/02/2012	25308869830009711120702	Influenza Vaccine - Live, Intranasal VIS
	CDCPHINVS	07/26/2013	25308869830009711130726	Influenza Vaccine - Live, Intranasal VIS
	CDCPHINVS	08/19/2014	25308869830009711140819	Influenza Vaccine - Live, Intranasal VIS
	CDCPHINVS	08/07/2015	25308869830009711150807	Influenza Vaccine - Live, Intranasal VIS
	CDCPHINVS	07/02/2012	25308869830001031112072	Influenza Vaccine - Inactivated VIS
	CDCPHINVS	07/26/2013	253088698300010311130726	Influenza Vaccine - Inactivated VIS
	CDCPHINVS	08/19/2014	253088698300010311140819	Influenza Vaccine - Inactivated VIS
	CDCPHINVS	08/07/2015	253088698300010311150807	Influenza Vaccine - Inactivated VIS
	CDCPHINVS	12/07/2011	253088698300011011111207	Japanese Encephalitis VIS
	CDCPHINVS	01/24/2014	2530886983000110111140124	Japanese Encephalitis VIS
	CDCPHINVS	04/20/2012	253088698300012711120420	Measles/Mumps/Rubella VIS
	CDCPHINVS	02/12/2018	253088698300012711180212	MMR Vaccine VIS
	CDCPHINVS	05/21/2010	253088698300013411100521	Measles/Mumps/Rubella/Varicella VIS
	CDCPHINVS	02/12/2018	253088698300013411180212	MMRV Vaccine VIS
	CDCPHINVS	10/14/2011	253088698300014111111014	Meningococcal VIS
	CDCPHINVS	03/31/2016	253088698300014111160331	Meningococcal ACWY Vaccines VIS
	CDCPHINVS	08/24/2018	253088698300014111180824	Meningococcal ACWY Vaccines VIS

Appendix Type	Table	Name	Value	Description
	CDCPHINVS	08/24/2015	253088698300030111150814	Meningococcal B VIS
	CDCPHINVS	11/16/2012	253088698300026411121116	Multiple Vaccines VIS
	CDCPHINVS	10/22/2014	253088698300026411141022	Multiple Vaccines VIS
	CDCPHINVS	11/05/2015	253088698300026411151105	Multi Pediatric Vaccines VIS
	CDCPHINVS	04/16/2010	253088698300015811100416	Pneumococcal Conjugate (PCV13) VIS
	CDCPHINVS	02/27/2013	253088698300015811130227	Pneumococcal Conjugate (PCV13) VIS
	CDCPHINVS	11/05/2015	253088698300015811151105	PCV13 Vaccine VIS
	CDCPHINVS	10/06/2009	253088698300016511091006	Pneumococcal Polysaccharide VIS
	CDCPHINVS	04/24/2015	253088698300016511150424	Pneumococcal Polysaccharide VIS
	CDCPHINVS	11/08/2011	253088698300017211111108	Polio VIS
	CDCPHINVS	07/20/2016	253088698300017211160720	Polio Vaccine VIS
	CDCPHINVS	10/06/2009	253088698300018911091006	Rabies VIS
	CDCPHINVS	02/12/2018	253088698300032511180212	Recombinant Zoster Vaccine VIS
	CDCPHINVS	12/06/2010	253088698300019611101206	Rotavirus VIS
	CDCPHINVS	08/26/2013	253088698300019611130826	Rotavirus VIS
	CDCPHINVS	04/15/2015	253088698300019611150415	Rotavirus VIS
	CDCPHINVS	02/23/2018	253088698300019611180223	Rotavirus Vaccine VIS
	CDCPHINVS	08/09/2016	253088698300030111160809	Serogroup B Meningococcal Vaccine VIS
	CDCPHINVS	10/06/2009	253088698300020211091006	Shingles VIS
	CDCPHINVS	02/12/2018	253088698300020211180212	Live Zoster Vaccine VIS
	CDCPHINVS	04/11/2017	253088698300028811170411	Tetanus/Diphtheria (Td) Vaccine VIS
	CDCPHINVS	02/4/2014	253088698300028811140204	Tetanus/Diphtheria (Td) VIS
	CDCPHINVS	02/24/2015	253088698300028811150224	Tetanus/Diphtheria (Td) VIS
	CDCPHINVS	05/09/2013	253088698300027111130509	Tetanus/Diphtheria/Pertussis (Tdap) VIS
	CDCPHINVS	02/24/2015	253088698300027111150224	Tetanus/Diphtheria/Pertussis (Tdap) VIS
	CDCPHINVS	01/24/2012	253088698300022611120124	Tetanus/Diphtheria/Pertussis (Tdap/Td) VIS
	CDCPHINVS	05/29/2012	253088698300023311120529	Typhoid VIS
	CDCPHINVS	03/13/2008	253088698300024011080313	Varicella (Chickenpox) VIS
	CDCPHINVS	02/12/2018	253088698300024011180212	Varicella Vaccine VIS
	CDCPHINVS	03/30/2011	253088698300025711110330	Yellow Fever VIS
HL7	0441	Immunization Registry Status		
	0441		A	Active
	0441		I	Inactive
	0441		P	Permanently Inactive-Deceased
HL7	0516	Error Severity		
	0516		W	Warning
	0516		I	Information
	0516		E	Error
	0533		207.4	Record pended. The client matched has existing immunizations given earlier than incoming birth date.
	0533		207.5	OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.
	0533		207.6	ERROR: Delete refusal transactions are not permitted for this organization.
	0533		207.7	Record rejected. Comment must be deleted by owning provider organization.

Appendix Type	Table	Name	Value	Description
	0533		207.8	Record rejected. No matching comment was found to delete.
	0533		207.9	The incoming delete immunization does not match an existing immunization in NCIR. This delete was not processed.
	0533		207.10	The sending provider organization does not own the existing matched inventory immunization. This delete was not processed.
	0533		207.11	RXA-6 DEDUCT ERROR. Dose size greater the 2 times the vaccine lot dose quantity. Immunization processed as Owned Non-deducting
	0533		207.12	The incoming client matches an existing candidate. Existing candidate client id is <client-id>.
	0533		207.13	The incoming client matches more than one existing candidate. Existing candidate client ids include <client-ids>.
	0533		207.14	NK1-20: Primary language of responsible person <last name> defaulted to English.
	0533		207.15	INFORMATIONAL Message. Incoming Immunization Likely a match to existing Immunization
	0533		207.16	Inventory immunization is a duplicate of another incoming inventory immunization.
	0533		207.17	PV1:20 Provide eligibility code in OBX
	0533		207.18	Information error - Invalid street address <Street Address>. No Address values stored.
	0533		207.20	NK1-4 Informational error - Invalid city <City>. No value stored.
	0533		207.21	NK1-4 Informational error - Invalid state code <State>. No value stored.
	0533		207.22	PID-3 Record Rejected - Invalid first name <First Name>.
	0533		207.23	PID-3 Record Rejected - Invalid Last Name <Last Name>.
	0533		207.24	PID-3 Informational error - Invalid middle name <Middle Name>). No value stored.
	0533		207.26	Informational error - Invalid responsible party first name <First Name>. No value stored.
	0533		207.27	Informational error - Invalid responsible party middle name <Middle Name>. No value stored.
	0533		207.28	Informational error - Invalid responsible party last name <Last Name>. No value stored.
	0533		207.29	PID-6 Informational error - Invalid mother's first name <First Name> . No value stored.
	0533		207.30	PID-6 Informational error - Invalid mother's maiden name <Last Name>. No value stored.
	0533		207.35	Message rejected. Client first name must be greater than one character in length.
	0533		207.36	Message rejected. Client last name must be greater than one character in length.
	0533		207.37	Informational error - Invalid administered by last name <Last Name>. No value stored.
	0533		207.38	PID-5 Message rejected. <Last Name> is not a valid last name.

Appendix Type	Table	Name	Value	Description
	0533		207.39	PID-5 Message rejected. <First Name> is not a valid first name.
	0533		207.40	DEDUCT ERROR. Lot has insufficient inventory for inventory deduction. Immunization processed as Owned Non-deducting.
	0533		207.41	RXA-16 DEDUCT WARNING. Vaccine Lot Expiration Date does not match
	0533		207.42	DEDUCT WARNING. Immunization Date is after Lot Expiration.
	0533		207.43	DEDUCT WARNING: Reactivating the inactive vaccine lot. Immunization processed as Owned Non deducting.
	0533		207.44	Record rejected. This comment matches another comment in incoming file.
	0533		207.45	Record rejected. This reaction matches another reaction for same immunization in incoming file.
	0533		207.46	INFORMATIONAL Message. Incoming Immunization saved but might be a duplicate
	0533		207.47	Rejected Inventory. Incoming is a duplicate of an existing immunization.
	0533		207.48	Inventory Warning. Incoming is possibly a duplicate of an existing immunization.
	0533		207.49	Record rejected. This immunization matches another immunization in incoming file. The incoming immunization that this system retained may be identified by the following characteristics -> <Vaccination Date> + <CPT Code> + <TradeName>.
	0533		207.50	The incoming delete immunization does not match an existing immunization. This delete was not processed.
	0533		207.53	No Vaccine Lot Found with Search Args: Site Id: <Site Id> + TradeName: <TradeName> + LotNum: <Lot Number> +
	0533		207.54	No Vaccine Lot Found with Search Args: Site Id: <Site Id> + TradeName: <TradeName> + LotNum: <Lot Number> + Fund Code: <Fund Code>. Setting to Owned Non Deducting
	0533		207.55	ERROR: Maximum number of Web Service delete refusal transactions has been exceeded.
	0533		207.56	ERROR: Maximum number of delete refusal transactions has been exceeded in this file.
	0533		207.57	ERROR: Maximum number of Web Service delete immunization transactions has been exceeded.
	0533		207.58	ERROR: Maximum number of delete immunization transactions has been exceeded in this file.
	0533		207.59	Only up to 4 responsible persons accepted.
	0533		207.60	DEDUCT INFO: Multiple matching vaccine lots found, using the oldest. Vaccine Lot id:<Vaccine Lot ID>
	0533		207.63	DEDUCT ERROR. Not valid Multiplier for Vaccine Lot. Immunization processed as Owned Non-deducting.
	0533		207.65	INFORMATIONAL ERROR: Immunization is being combined with another incoming inventory immunization.

Appendix Type	Table	Name	Value	Description
	0533		207.66	INFORMATIONAL ERROR: Immunization is being combined with another incoming immunization.
	0533		207.67	MSH-4 Record rejected. The provider organization that initiated this data exchange is not identified as a parent or vendor of the organization that it labeled as the "SENDING PROVIDER ORGANIZATION" for this record.
	0533		207.68	Informational error - Trade Name <Trade Name> not produced by manufacturer <Manufacturer>. Defaulting to unknown manufacturer.
	0533		207.70	TradeNameId Not found for <Manufacturer ID> + <Vaccine ID> +<CVX Code> + <CPT Code>.
	0533		207.72	OBX-05:Eligibility code NC02 is only valid if the owning organization is Title X Eligible. Eligibility ignored.
	0533		207.73	OBX-05: Financial Class: A state supplied dose was provided when a private dose should have been provided.
	0533		207.76	ERROR: Delete immunization transactions are not permitted for this organization.
	0533		207.77	PID-13: Please provide patient phone number in NK1 segment.
	0533		207.79	Eligibility required. Immunization processed as owned non-deduct.
	0533		207.80	Cannot Deduct quantity 0. Incomplete Vaccine and/or Trade Name set up. Contact DX Helpdesk to correct set up.
	0533		207.82	Record rejected. Both owning provider organization id and initiating provider organization id are 0.
	0533		207.87	Informational error - Invalid Suffix <Name Suffix>. No value Stored.
	0533		207.88	The incoming client information has been saved <client id> for review by a State BA, who will decide the appropriate existing client to match to.
	0533		207.89	The incoming client information has NOT been saved because of the \"Record Rejected\" error(s).
	0533		207.92	PID-11: Invalid Address Type: <Address Type>. Defaulting to M.
	0533		207.93	Number of candidates exceeds the limit submitted in RCP-2 or system limit of 20.
	0533		207.96	NK1-Responsible person required in the NCIR. No NK1 segment provided.
	0533		207.97	Contact address and/or phone number required. Please send address and/or phone number.
NIP	NIP001	Immunization information source		
	NIP001		00	New immunization record
	NIP001		01	Historical information – source unspecified
NIP	NIP002	Substance Refusal Reason		
	NIP002		00	Parental Refusal
	NIP002		01	Religious Exemption
NIP	NIP003	Observation identifiers		Use in OBX-3)

Appendix Type	Table	Name	Value	Description
	NIP003		29768-9	Date Vaccine Information Statement Published
	NIP003		29769-7	Date Vaccine Information Statement Presented
	NIP003		64994-7	Vaccine funding program (Eligibility code) See table 0064.
	NIP003		30956-7	Vaccine Type (Vaccine group or family) CVX codes values from table HL70292.
	NIP003		38890-0	Component Vaccine Type CVX codes values from table HL70292.
	NIP003		30963-3	Funds vaccine purchased with See Immunization Funding Source values below.
	NIP003		30945-0	Vaccination contraindication/precaution See Contraindications, Precautions below.
	NIP003		31044-1	Reaction See Reaction Codes below.
	NIP003		59784-9	Disease with presumed immunity See Evidence of Immunity below.
	NIP003		59785-6	Indications to immunize See Vaccination Special Indications below
NIP	NIP003	Immunization Funding Source (OBX-3 LOINC code: 30963-3)		
	CDCPHINVS		PHC70	Private funds
	CDCPHINVS		VXC1 or VXC2	State-supplied funds
NIP	NIP004	Contraindications, Precautions (OBX-3 LOINC code: 30945-0)		
L		01		Recipient condition – unspecified
L		02		Household condition – unspecified
L		11		Collapse or shock like state within 48 hours of previous dose of DTP/DTaP
L		12		Convulsions (fits, seizures) within 3 days of previous dose of DTP/DTaP
L		13		Persistent, inconsolable crying lasting 3 hours within 48 hours of previous dose of DTP/DTaP
L		17		Fever $\geq 40.5^{\circ}\text{C}$ (105°F) within 48 hours of previous dose of DTP/DTaP
L		18		Guillain-Barré Syndrome (GBS) within 6 weeks after DTP/DTaP
L		42		Household contact of infant < 6 months
L		43		High risk condition of influenza
L		R1		Clinician has decided to repeat the DTaP series
L		R2		Clinician has decided to repeat the Hep B series
L		R3		Clinician has decided to repeat the Hib series
L		R4		Clinician has decided to repeat the Polio series
L		R5		Clinician has decided to repeat the MMR series
L		R6		Clinician has decided to repeat the Pneumococcal series
L		R7		Clinician has decided to repeat the Varicella series
L		R8		Clinician has decided to repeat the Meningo series

Appendix Type	Table	Name	Value	Description
	L		R9	Clinician has decided to repeat the Rotavirus series
	L		R10	Clinician has decided to repeat the HPV series
	L		R11	Clinician has decided to repeat the HepA series
	L		R12	Clinician has decided to repeat the Zoster series
	L		R13	Clinician has decided to repeat the Influenza series
	SCT		91930004	Allergy to egg ingestion (anaphylactic)
	SCT		294847001	Allergy to gelatin (anaphylactic)
	SCT		294468006	Allergy to neomycin (anaphylactic)
	SCT		294466005	Allergy to streptomycin (anaphylactic)
	SCT		27624003	Chronic illness
	SCT		77386006	Pregnancy (in recipient) – refer to CDC guidelines for vaccinating pregnant women
	CDCPHINVS		VXC18	Allergy to baker's yeast (anaphylactic)
	CDCPHINVS		VXC19	Allergy to Thimerosal - refer to package insert (anaphylactic)
	CDCPHINVS		VXC20	Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic)
	CDCPHINVS		VXC22	Encephalopathy within 7 days of previous dose of DTP or DTAP
	CDCPHINVS		VXC24	Current acute illness, moderate to severe (with or without fever)
		(OBX-3 LOINC code: 75505-8)		
	SCT		371113008	Serology confirmed varicella
	SCT		371111005	Serology confirmed measles
	SCT		278968001	Serology confirmed rubella
	SCT		341112003	Serology confirmed mumps
		(OBX-3 LOINC code: 59784-9)		
	L		33	Immunity: Varicella – Evidence prior to 7/1/2015, Laboratory-tested or history of varicella disease (Chicken pox)
	L		44	Immunity: Varicella – Laboratory-tested Confirmation
	SCT		38907003	Immunity: Varicella – Provider Verified History
	CDCPHINVS	(OBX-3 LOINC code: 59785-6)	VXC7	Client has been exposed to rabies
NCIR	NCIR001	Reaction Codes (OBX-3 LOINC code: 31044-1)		
	NCIR001		81308009	Encephalopathy within 7 days
	NCIR001		VXC13	Guillain-Barre syndrome (GBS) within 6 weeks
	NCIR001		VXC9	Persistent inconsolable crying lasting 3 hours or more within 48 hours
	NCIR001		VXC10	Collapse or shock-like state within 48 hours of dose
	NCIR001		VXC11	Convulsions (fits, seizures) within 72 hours of dose
	NCIR001		VXC12	Fever of >40.5C (105F) within 48 hours

Appendix Type	Table	Name	Value	Description
	NCIR001		39579001	Allergic reaction to this vaccine or to any of its unlisted vaccine components (anaphylactic)
NCIR	VTN	Vaccine Trade Name (VTN)	ACEL-IMUNE	Acel-Imune
	VTN		ACTHIB	ActHib
	VTN		ADACEL	ADACEL
	VTN		ADENO T4	ADENO T4
	VTN		ADENO T7	ADENO T7
	VTN		AFLURIA	AFLURIA
	VTN		AFLURIA PRES-FREE	AFLURIA PRES-FREE
	VTN		AFLURIA IIV4	AFLURIA IIV4
	VTN		AFLURIA IIV4 PRES-FREE	AFLURIA IIV4 PRES-FREE
	VTN		AGRIFLU PRES-FREE	AGRIFLU PRES-FREE
	VTN		ANTHRAX	ANTHRAX
	VTN		ATTENUVAX	ATTENUVAX
	VTN		BCG-CANCER	BCG-CANCER
	VTN		BCG-TB	BCG-TB
	VTN		BERNA/TY21A	BERNA/TY21A
	VTN		BEXSERO	BEXSERO
	VTN		BIAVAX II	BIAVAX II
	VTN		BOOSTRIX	BOOSTRIX
	VTN		CERTIVA	CERTIVA
	VTN		CERVARIX	CERVARIX
	VTN		CHOLERA-I	CHOLERA-I
	VTN		CHOLERA-O	CHOLERA-O
	VTN		COMVAX	COMVAX
	VTN		DAPTACEL	DAPTACEL
	VTN		DECAVAC	DECAVAC
	VTN		DIPHTHERIA	DIPHTHERIA
	VTN		DRYVAX	DRYVAX
	VTN		DT	DT
	VTN		DTP	DTP
	VTN		ENGERIX-B ADULT	ENGERIX-B ADULT
	VTN		ENGERIX-B DIALYSIS	ENGERIX-B DIALYSIS
	VTN		ENGERIX-B PEDS	ENGERIX-B PEDS
	VTN		FLU NASAL, UNSPECIFIED	Influenza nasal, unspecified formulation
	VTN		FLUAD IIV3 PRES-FREE	FLUAD IIV3 PRES-FREE
	VTN		FLUARIX IIV4 PRES-FREE	FLUARIX IIV4 PRES-FREE
	VTN		FLUARIX PRES-FREE	FLUARIX PRES-FREE
	VTN		FLUBLOK RIV3 PRES-FREE	FLUBLOK RIV3 PRES-FREE
	VTN		FLUBLOK RIV4 PRES-FREE	FLUBLOK RIV4 PRES-FREE
	VTN		FLUCELVAX IIV3 PRES-FREE	FLUCELVAX IIV3 PRES-FREE
	VTN		FLUCELVAX IIV4	FLUCELVAX IIV4
	VTN		FLUCELVAX IIV4 PRES-FREE	FLUCELVAX IIV4 PRES-FREE
	VTN		FLULALVAL	FLULALVAL
	VTN		FLULALVAL IIV4	FLULALVAL IIV4
	VTN		FLULALVAL IIV4 PRES-FREE	FLULALVAL IIV4 PRES-FREE

Appendix Type	Table	Name	Value	Description
VTN			FLUMIST LAIV4	FLUMIST LAIV4
VTN			FLUMIST	FLUMIST
VTN			FLUVIRIN PRES-FREE	FLUVIRIN PRES-FREE
VTN			FLUVIRIN	FLUVIRIN
VTN			FLUZONE HIGH-DOSE	FLUZONE HIGH-DOSE
VTN			FLUZONE IIV4	FLUZONE IIV4
VTN			FLUZONE IIV4 P-FREE, PED	FLUZONE IIV4 P-FREE, PED
VTN			FLUZONE IIV4 PRES-FREE	FLUZONE IIV4 PRES-FREE
VTN			FLUZONE ID IIV4 PF	Fluzone Intradermal IIV4 Pres-Free
VTN			FLUZONE INTRADERMAL PF	Fluzone Intradermal Pres-Free
VTN			FLUZONE PRES-FREE	FLUZONE PRES-FREE
VTN			FLUZONE	FLUZONE
VTN			GARDASIL	GARDASIL
VTN			GARDASIL 9	GARDASIL 9
VTN			H1N1 CSL P-FREE .25	H1N1 CSL P-FREE .25
VTN			H1N1 CSL P-FREE .5	H1N1 CSL P-FREE .5
VTN			H1N1 CSL	H1N1 CSL
VTN			H1N1 IDB	H1N1 IDB
VTN			H1N1 MEDIMMUNE, NASAL	H1N1 MEDIMMUNE, NASAL
VTN			H1N1 NOVARTIS P-FREE	H1N1 NOVARTIS P-FREE
VTN			H1N1 NOVARTIS	H1N1 NOVARTIS
VTN			H1N1 SANOFI P-FREE .25	H1N1 SANOFI P-FREE .25
VTN			H1N1 SANOFI P-FREE .5	H1N1 SANOFI P-FREE .5
VTN			H1N1 SANOFI	H1N1 SANOFI
VTN			HAVRIX-ADULT	HAVRIX-ADULT
VTN			HAVRIX-PEDS 2 DOSE	HAVRIX-PEDS 2 DOSE
VTN			HAVRIX-PEDS 3 DOSE	HAVRIX-PEDS 3 DOSE
VTN			HEPLISAV-B	HEPLISAV-B
VTN			HIBERIX	HIBERIX
VTN			HIB-TITER	HIB-TITER
VTN			IMOVAX RABIES ID	IMOVAX RABIES ID
VTN			IMOVAX RABIES IM	IMOVAX RABIES IM
VTN			INFANRIX	INFANRIX
VTN			IPOL	IPOL
VTN			IXIARO	IXIARO
VTN			JE-VAX	JE-VAX
VTN			KINRIX	KINRIX
VTN			LYMERIX	LYMERIX
VTN			MCV4, UNSPECIFIED	MCV4, unspecified formulation
VTN			MEASLES	MEASLES
VTN			MEASLES-RUBELLA (MERU)	MEASLES-RUBELLA (MERU)
VTN			MENACTRA	MENACTRA
VTN			MENHIBRIX	MENHIBRIX
VTN			MENOMUNE	MENOMUNE
VTN			MENVEO	MENVEO
VTN			MERUVAX II	MERUVAX II
VTN			MMR II	MMR II

Appendix Type	Table	Name	Value	Description
VTN			M-R-VAX	M-R-VAX
VTN			MUMPS	MUMPS
VTN			MUMPS-RUBELLA (MURU)	MUMPS-RUBELLA (MURU)
VTN			MUMPSVAX	MUMPSVAX
VTN			OMNIHIB	OMNIHIB
VTN			ORIMUNE	ORIMUNE
VTN			PEDIARIX	PEDIARIX
VTN			PEDVAXHIB	PEDVAXHIB
VTN			PENTACEL	PENTACEL
VTN			PLAQUE	PLAQUE
VTN			PNEUMOVAX 23	PNEUMOVAX 23
VTN			PNU-IMUNE 23	PNU-IMUNE 23
VTN			PREVNAR 13	PREVNAR 13
VTN			PREVNAR 7	PREVNAR 7
VTN			PROHIBIT	PROHIBIT
VTN			PROQUAD	PROQUAD
VTN			QUADRACEL	QUADRACEL
VTN			RABAVERT	RABAVERT
VTN			RECOMBIVAX-PEDS	RECOMBIVAX-PEDS
VTN			RECOMBIVAX-ADULT	RECOMBIVAX-ADULT
VTN			RECOMBIVAX-DIALYSIS	RECOMBIVAX-DIALYSIS
VTN			ROTARIX	ROTARIX
VTN			ROTASHIELD	ROTASHIELD
VTN			ROTATEQ	ROTATEQ
VTN			RUBELLA	RUBELLA
VTN			SHINGRIX	SHINGRIX
VTN			TD	TD
VTN			TD(GENERIC)	TD(GENERIC)
VTN			TD-MASSBIOLAB	TD-MASSBIOLAB
VTN			TD-PRES-FREE	TD-PRES-FREE
VTN			TENIVAC	TENIVAC
VTN			TETRAMUNE	TETRAMUNE
VTN			TRIHBIT	TRIHBIT
VTN			TRIPEDIA	TRIPEDIA
VTN			TRUMENBA	TRUMENBA
VTN			TT	TT
VTN			TWINRIX	TWINRIX
VTN			TYPHIM VI	TYPHIM VI
VTN			TYPOHOID	TYPOHOID
VTN			TYPOHOID-AKD	TYPOHOID-AKD
VTN			VACCINIA, DILUTED	VACCINIA, DILUTED
VTN			VAQTA-ADULT	VAQTA-ADULT
VTN			VAQTA-PEDS 2 DOSE	VAQTA-PEDS 2 DOSE
VTN			VAQTA-PEDS 3 DOSE	VAQTA-PEDS 3 DOSE
VTN			VARIVAX	VARIVAX
VTN			VIVOTIF	VIVOTIF
VTN			YF-VAX	YF-VAX

Appendix Type	Table	Name	Value	Description
	VTN		ZOSTAVAX	ZOSTAVAX
NCIR	CPT	Vaccines Administered (CPT Codes)		
	CPT		90476	Adeno T4
	CPT		90477	Adeno T7
	CPT		90581	Anthrax
	CPT		90586	BCG-BC
	CPT		90585	BCG-TB
	CPT		90725	Cholera-Inject
	CPT		90592	Cholera-Oral
	CPT		90719	Diphtheria
	CPT		90702	DT-Peds
	CPT		90700	DTaP
	CPT		90723	DTaP/Polio/Hep B
	CPT		90721	DTaP-Hib
	CPT		90698	Dtap-Hib-IPV
	CPT		90696	DTaP-IPV
	CPT		90701	DTP
	CPT		90720	DTP-Hib
	CPT		90659	FLU whole cell
	CPT		90660	FLU-Nasal
	CPT		90632	HepA Adult
	CPT		90633	HepA Ped-2 dose
	CPT		90634	HepA Ped-3 dose
	CPT		90636	HepA-HepB Adult
	CPT		90743	HepB adolescent – 2 dose
	CPT		90746	HepB-Adult
	CPT		90739	HepB-CpG
	CPT		90740	HepB-Dialysis 3 dose
	CPT		90747	HepB-Dialysis 4 dose
	CPT		90748	HepB-Hib
	CPT		90744	HepB-Peds
	CPT		90645	Hib-HbOC
	CPT		90644	Hib-MenCY-TT
	CPT		90647	Hib-OMP
	CPT		90646	Hib-PRP-D
	CPT		90648	Hib-PRP-T
	CPT		90651	HPV9
	CPT		90650	HPV, bivalent
	CPT		90649	HPV, quadrivalent
	CPT		90756	Influenza, IIV4, IM, MDCK
	CPT		90674	Influenza, IIV4, IM, MDCK, pres-free
	CPT		90630	Influenza, intradermal, IIV4, pres-free
	CPT		90687	Influenza, seasonal, IIV4, IM (Age >= 6 M < 3Y)
	CPT		90688	Influenza, seasonal, IIV4, IM (Age = 3 Y & up)
	CPT		90685	Influenza, seasonal, IIV4, IM, pf, peds (Age >= 6 M < 3Y)

Appendix Type	Table	Name	Value	Description
	CPT		90686	Influenza, seasonal, IIV4, IM, pres-free (Age = 3 Y & up)
	CPT		90672	Influenza, seasonal, LAIV4, IN
	CPT		90661	Influenza, seasonal, MDCK, IM, pres-free
	CPT		90673	Influenza, recombinant, seasonal, IM, pf
	CPT		90682	Influenza, recombinant, IIV4, IM, p-free
	CPT		90655	Influenza, seasonal, preservative free (Age >= 6 M < 3Y)
	CPT		90656	Influenza, seasonal, preservative free (Age = 3 Y & up)
	CPT		90657	Influenza, seasonal, injectable (Age >= 6 M < 3Y)
	CPT		90658	Influenza, seasonal, injectable (Age = 3 Y & up)
	CPT		90654	Influenza, seasonal, intradermal, p-free
	CPT		90662	Influenza, High-Dose Seasonal
	CPT		90735	Japanese Encephalitis SC
	CPT		90738	Japanese Encephalitis IM
	CPT		90665	Lyme
	CPT		90705	Measles
	CPT		90708	Measles-Rubella
	CPT		90621	Meningococcal B, recombinant
	CPT		90620	Meningococcal B, OMV
	CPT		90734	Meningococcal conjugate MCV4
	CPT		90733	Meningococcal polysaccharide MPSV4
	CPT		90707	MMR
	CPT		90710	MMRV
	CPT		90704	Mumps
	CPT		90663	Novel Influenza-H1N1-09 all formulations
	CPT		90727	Plague
	CPT		90669	Pneumococcal Conjugate 7
	CPT		90670	Pneumococcal Conjugate 13
	CPT		90732	Pneumococcal Polysaccharide 23
	CPT		90713	Polio IPV
	CPT		90712	Polio oral
	CPT		90676	Rabies-ID
	CPT		90675	Rabies-IM
	CPT		90726	Rabies, NOS
	CPT		90680	Rotavirus, tetrivalent (if date administered prior to 02/03/2006)
	CPT		90680	Rotavirus, pentavalent (if date administered on or after 02/03/2006)
	CPT		90706	Rubella
	CPT		90709	Rubella-Mumps
	CPT		90718	Td
	CPT		90714	Td – adult preservative free (if date administered on or after 07/01/2005)
	CPT		90715	Tdap
	CPT		90703	Tetanus
	CPT		90714	Typhoid, unspecified formulation (if date administered prior to 07/01/2005)

Appendix Type	Table	Name	Value	Description
	CPT		90693	Typhoid-AKD
	CPT		90692	Typhoid-HP
	CPT		90690	Typhoid-Oral
	CPT		90691	Typhoid-ViCPs
	CPT		90716	Varicella
	CPT		90717	Yellow Fever
	CPT		90750	Zoster recombinant
	CPT		90736	Zoster vaccine, live
	CPT		90728	Deleted BCG code
	CPT		90730	Deleted HepA code
	CPT		90745	Deleted HepB
	CPT		90731	Deleted HepB code
	CPT		90737	Deleted Hib code
	CPT		90724	Deleted Influenza code
	CPT		90726	Deleted Rabies
NCIR	NDC	Vaccines Administered (Package NDC)		
	NDC		49281-0545-05	ActHib
	NDC		49281-0545-03	ActHib
	NDC		49281-0400-05	Adacel
	NDC		49281-0400-10	Adacel
	NDC		49281-0400-15	Adacel
	NDC		49281-0400-20	Adacel
	NDC		33332-0111-10	AFLURIA
	NDC		33332-0113-10	AFLURIA
	NDC		33332-0114-10	AFLURIA
	NDC		33332-0115-10	AFLURIA
	NDC		33332-0116-10	AFLURIA
	NDC		33332-0117-10	AFLURIA
	NDC		33332-0416-10	Afluria IIV4
	NDC		33332-0417-10	Afluria IIV4
	NDC		33332-0418-10	Afluria IIV4
	NDC		33332-0316-01	Afluria IIV4 Pres-Free
	NDC		33332-0317-01	Afluria IIV4 Pres-Free
	NDC		33332-0318-01	Afluria IIV4 Pres-Free
	NDC		33332-0011-01	AFLURIA Pres-Free
	NDC		33332-0012-01	AFLURIA Pres-Free
	NDC		33332-0013-01	AFLURIA Pres-Free
	NDC		33332-0014-01	AFLURIA Pres-Free
	NDC		33332-0015-01	AFLURIA Pres-Free
	NDC		33332-0016-01	AFLURIA Pres-Free
	NDC		33332-0017-01	AFLURIA Pres-Free
	NDC		46028-0110-01	Agriflu Pres-Free
	NDC		46028-0114-01	Bexsero
	NDC		46028-0114-02	Bexsero
	NDC		58160-0976-20	Bexsero

Appendix Type	Table	Name	Value	Description
	NDC		58160-0976-06	Bexsero
	NDC		58160-0842-11	Boostrix
	NDC		58160-0842-34	Boostrix
	NDC		58160-0842-52	Boostrix
	NDC		58160-0830-34	Cervarix
	NDC		58160-0830-46	Cervarix
	NDC		58160-0830-52	Cervarix
	NDC		00006-4898-00	Comvax
	NDC		49281-0286-01	DAPTACEL
	NDC		49281-0286-05	DAPTACEL
	NDC		49281-0286-10	DAPTACEL
	NDC		49281-0291-10	DECAVAC
	NDC		49281-0291-83	DECAVAC
	NDC		49281-0225-10	DT
	NDC		49281-0278-10	DT
	NDC		58160-0821-11	Engerix-B Adult
	NDC		58160-0821-34	Engerix-B Adult
	NDC		58160-0821-52	Engerix-B Adult
	NDC		58160-0820-11	Engerix-B Peds
	NDC		58160-0820-52	Engerix-B Peds
	NDC		70461-0002-01	Fluad IIV3 Pres-Free
	NDC		70461-0018-03	Fluad IIV3 Pres-Free
	NDC		58160-0901-52	Fluarix IIV4 Pres-Free
	NDC		58160-0903-52	Fluarix IIV4 Pres-Free
	NDC		58160-0905-52	Fluarix IIV4 Pres-Free
	NDC		58160-0907-52	Fluarix IIV4 Pres-Free
	NDC		58160-0898-52	Fluarix IIV4 Pres-Free
	NDC		58160-0878-52	Fluarix Pres-Free
	NDC		58160-0879-52	Fluarix Pres-Free
	NDC		58160-0880-52	Fluarix Pres-Free
	NDC		58160-0881-52	Fluarix Pres-Free
	NDC		42874-0012-10	Flublok RIV3 Pres-Free
	NDC		42874-0013-10	Flublok RIV3 Pres-Free
	NDC		42874-0014-10	Flublok RIV3 Pres-Free
	NDC		42874-0015-10	Flublok RIV3 Pres-Free
	NDC		42874-0016-10	Flublok RIV3 Pres-Free
	NDC		42874-0017-10	Flublok RIV3 Pres-Free
	NDC		42874-0116-10	Flublok RIV4 Pres-Free
	NDC		42874-0017-10	Flublok RIV4 Pres-Free
	NDC		49281-0718-10	Flublok RIV4 Pres-Free
	NDC		62577-0613-01	Flucelvax IIV3 Pres-Free
	NDC		62577-0614-01	Flucelvax IIV3 Pres-Free
	NDC		63851-0612-01	Flucelvax IIV3 Pres-Free
	NDC		70461-0418-10	Flucelvax IIV4
	NDC		70461-0200-01	Flucelvax IIV4 Pres-Free
	NDC		70461-0201-01	Flucelvax IIV4 Pres-Free
	NDC		70461-0318-03	Flucelvax IIV4 Pres-Free

Appendix Type	Table	Name	Value	Description
	NDC		19515-0890-07	FluLaval
	NDC		19515-0892-52	FluLaval
	NDC		19515-0893-07	FluLaval
	NDC		19515-0691-11	FluLaval IIV4
	NDC		19515-0898-11	FluLaval IIV4
	NDC		19515-0903-11	FluLaval IIV4
	NDC		19515-0896-11	FluLaval IIV4
	NDC		19515-0900-11	FluLaval IIV4
	NDC		19515-0894-52	FluLaval IIV4 Pres-Free
	NDC		19515-0901-52	FluLaval IIV4 Pres-Free
	NDC		19515-0912-52	FluLaval IIV4 Pres-Free
	NDC		19515-0909-52	FluLaval IIV4 Pres-Free
	NDC		19515-0891-11	FluLaval IIV4
	NDC		66019-0109-10	FluMist
	NDC		66019-0110-10	FluMist
	NDC		66019-0300-10	FluMist LAIV4
	NDC		66019-0301-10	FluMist LAIV4
	NDC		66019-0302-10	FluMist LAIV4
	NDC		66019-0304-10	FluMist LAIV4
	NDC		66019-0305-10	FluMist LAIV4
	NDC		66521-0112-10	Fluvirin
	NDC		66521-0113-10	Fluvirin
	NDC		66521-0114-10	Fluvirin
	NDC		66521-0115-10	Fluvirin
	NDC		66521-0116-10	Fluvirin
	NDC		66521-0117-10	Fluvirin
	NDC		66521-0118-10	Fluvirin
	NDC		70461-0120-10	Fluvirin
	NDC		66521-0112-02	Fluvirin Pres-Free
	NDC		66521-0113-02	Fluvirin Pres-Free
	NDC		66521-0114-02	Fluvirin Pres-Free
	NDC		66521-0115-02	Fluvirin Pres-Free
	NDC		66521-0116-02	Fluvirin Pres-Free
	NDC		66521-0117-02	Fluvirin Pres-Free
	NDC		66521-0118-02	Fluvirin Pres-Free
	NDC		70461-0120-02	Fluvirin Pres-Free
	NDC		49281-0388-15	Fluzone
	NDC		49281-0390-15	Fluzone
	NDC		49281-0392-15	Fluzone
	NDC		49281-0394-15	Fluzone
	NDC		49281-0396-15	Fluzone
	NDC		49281-0385-65	Fluzone High-Dose
	NDC		49281-0395-65	Fluzone High-Dose
	NDC		49281-0397-65	Fluzone High-Dose
	NDC		49281-0399-65	Fluzone High-Dose
	NDC		49281-0401-65	Fluzone High-Dose
	NDC		49281-0403-65	Fluzone High-Dose

Appendix Type	Table	Name	Value	Description
	NDC		49281-0621-15	Fluzone IIV4
	NDC		49281-0623-15	Fluzone IIV4
	NDC		49281-0625-15	Fluzone IIV4
	NDC		49281-0627-15	Fluzone IIV4
	NDC		49281-0629-15	Fluzone IIV4
	NDC		49281-0514-25	Fluzone IIV4 P-Free, Ped
	NDC		49281-0515-25	Fluzone IIV4 P-Free, Ped
	NDC		49281-0516-25	Fluzone IIV4 P-Free, Ped
	NDC		49281-0517-25	Fluzone IIV4 P-Free, Ped
	NDC		49281-0518-25	Fluzone IIV4 P-Free, Ped
	NDC		49281-0414-10	Fluzone IIV4 Pres-Free
	NDC		49281-0414-50	Fluzone IIV4 Pres-Free
	NDC		49281-0415-10	Fluzone IIV4 Pres-Free
	NDC		49281-0415-50	Fluzone IIV4 Pres-Free
	NDC		49281-0416-10	Fluzone IIV4 Pres-Free
	NDC		49281-0416-50	Fluzone IIV4 Pres-Free
	NDC		49281-0417-50	Fluzone IIV4 Pres-Free
	NDC		49281-0417-10	Fluzone IIV4 Pres-Free
	NDC		49281-0418-50	Fluzone IIV4 Pres-Free
	NDC		49281-0418-10	Fluzone IIV4 Pres-Free
	NDC		49281-0708-40	Fluzone Intradermal IIV4 Pres-Free
	NDC		49281-0712-40	Fluzone Intradermal IIV4 Pres-Free
	NDC		49281-0703-55	Fluzone Intradermal Pres-Free
	NDC		49281-0707-55	Fluzone Intradermal Pres-Free
	NDC		49281-0011-10	Fluzone Pres-Free
	NDC		49281-0011-50	Fluzone Pres-Free
	NDC		49281-0012-10	Fluzone Pres-Free
	NDC		49281-0012-50	Fluzone Pres-Free
	NDC		49281-0013-10	Fluzone Pres-Free
	NDC		49281-0013-50	Fluzone Pres-Free
	NDC		49281-0014-50	Fluzone Pres-Free
	NDC		49281-0111-25	Fluzone Pres-Free
	NDC		49281-0112-25	Fluzone Pres-Free
	NDC		49281-0113-25	Fluzone Pres-Free
	NDC		00006-4045-00	Gardasil
	NDC		00006-4045-41	Gardasil
	NDC		00006-4109-02	Gardasil
	NDC		00006-4109-09	Gardasil
	NDC		00006-4119-02	Gardasil 9
	NDC		00006-4119-03	Gardasil 9
	NDC		00006-4121-02	Gardasil 9
	NDC		55045-3841-01	Havrix-Adult
	NDC		58160-0826-11	Havrix-Adult
	NDC		58160-0826-34	Havrix-Adult
	NDC		58160-0826-52	Havrix-Adult
	NDC		58160-0825-11	Havrix-Peds 2 Dose
	NDC		58160-0825-52	Havrix-Peds 2 Dose

Appendix Type	Table	Name	Value	Description
	NDC		50090-3469-00	HEPLISAV-B
	NDC		43528-0002-05	HEPLISAV-B
	NDC		43528-0003-05	HEPLISAV-B
	NDC		58160-0806-05	Hiberix
	NDC		58160-0816-05	Hiberix
	NDC		58160-0818-11	Hiberix
	NDC		58160-0810-11	Infanrix
	NDC		58160-0810-52	Infanrix
	NDC		49281-0860-10	IPOL
	NDC		42515-0001-01	Ixiaro
	NDC		58160-0812-11	KINRIX
	NDC		58160-0812-52	KINRIX
	NDC		49281-0589-05	Menactra
	NDC		58160-0801-11	MENHIBRIX
	NDC		58160-0809-05	MENHIBRIX
	NDC		46028-0208-01	Menveo
	NDC		58160-0955-09	Menveo
	NDC		46028-0218-11	Menveo
	NDC		00006-4681-00	MMR II
	NDC		58160-0811-52	Pediarix
	NDC		00006-4897-00	PedvaxHIB
	NDC		49281-0510-05	Pentacel
	NDC		00006-4739-00	Pneumovax 23
	NDC		00006-4837-03	Pneumovax 23
	NDC		00006-4943-00	Pneumovax 23
	NDC		00006-4837-02	Pneumovax 23
	NDC		00005-1971-02	Prevnar 13
	NDC		00005-1971-04	Prevnar 13
	NDC		00005-1971-05	Prevnar 13
	NDC		00005-1970-50	Prevnar 7
	NDC		00006-4171-00	ProQuad
	NDC		00006-4999-00	ProQuad
	NDC		49281-0562-10	QUADRACEL
	NDC		00006-4094-02	Recombivax-Adult
	NDC		00006-4094-09	Recombivax-Adult
	NDC		00006-4992-00	Recombivax-Adult
	NDC		00006-4995-00	Recombivax-Adult
	NDC		00006-4995-41	Recombivax-Adult
	NDC		00006-4093-02	Recombivax-Peds
	NDC		00006-4093-09	Recombivax-Peds
	NDC		00006-4981-00	Recombivax-Peds
	NDC		58160-0854-52	Rotarix
	NDC		00006-4047-20	ROTATEQ
	NDC		00006-4047-41	ROTATEQ
	NDC		58160-0819-12	SHINGRIX
	NDC		58160-0823-11	SHINGRIX
	NDC		14362-0111-03	Td

Appendix Type	Table	Name	Value	Description
	NDC		13533-0131-01	Td-Pres-Free
	NDC		17478-0131-01	Td, adsorbed
	NDC		49281-0215-10	TENIVAC
	NDC		49281-0215-15	TENIVAC
	NDC		49281-0298-10	Tripedia
	NDC		00005-0100-05	Trumenba
	NDC		00005-0100-10	Trumenba
	NDC		58160-0815-11	Twinrix
	NDC		58160-0815-34	Twinrix
	NDC		58160-0815-48	Twinrix
	NDC		58160-0815-52	Twinrix
	NDC		49281-0790-20	Typhim Vi
	NDC		49281-0790-51	Typhim Vi
	NDC		00006-4096-02	VAQTA-Adult
	NDC		00006-4096-09	VAQTA-Adult
	NDC		00006-4841-00	VAQTA-Adult
	NDC		00006-4841-41	VAQTA-Adult
	NDC		00006-4095-02	VAQTA-Peds 2 Dose
	NDC		00006-4095-09	VAQTA-Peds 2 Dose
	NDC		00006-4831-41	VAQTA-Peds 2 Dose
	NDC		00006-4826-00	Varivax
	NDC		00006-4827-00	Varivax
	NDC		49281-0915-01	YF-VAX
	NDC		49281-0915-05	YF-VAX
	NDC		00006-4963-00	Zostavax
	NDC		00006-4963-41	Zostavax
NCIR	NDC	Vaccines Administered (Unit NDC)		
	NDC		49281-0547-58	ActHib
	NDC		49281-0546-58	ActHib
	NDC		49281-0400-58	Adacel
	NDC		49281-0400-88	Adacel
	NDC		49281-0400-89	Adacel
	NDC		33332-0113-11	AFLURIA
	NDC		33332-0114-11	AFLURIA
	NDC		33332-0115-11	AFLURIA
	NDC		33332-0116-11	AFLURIA
	NDC		33332-0117-11	AFLURIA
	NDC		33332-0416-11	Afluria IIV4
	NDC		33332-0417-11	Afluria IIV4
	NDC		33332-0418-11	Afluria IIV4
	NDC		33332-0316-02	Afluria IIV4 Pres-Free
	NDC		33332-0317-02	Afluria IIV4 Pres-Free
	NDC		33332-0218-21	Afluria IIV4 Pres-Free
	NDC		33332-0318-02	Afluria IIV4 Pres-Free
	NDC		33332-0013-02	AFLURIA Pres-Free

Appendix Type	Table	Name	Value	Description
	NDC		33332-0014-02	AFLURIA Pres-Free
	NDC		33332-0015-02	AFLURIA Pres-Free
	NDC		33332-0016-02	AFLURIA Pres-Free
	NDC		33332-0017-02	AFLURIA Pres-Free
	NDC		46028-0114-11	Bexsero
	NDC		58160-0976-02	Bexsero
	NDC		58160-0842-05	Boostrix
	NDC		58160-0842-43	Boostrix
	NDC		58160-0842-01	Boostrix
	NDC		58160-0830-05	Cervarix
	NDC		58160-0830-43	Cervarix
	NDC		00006-4898-01	Comvax
	NDC		49281-0286-58	DAPTACEL
	NDC		49281-0225-58	DT
	NDC		58160-0821-05	Engerix-B Adult
	NDC		58160-0821-43	Engerix-B Adult
	NDC		58160-0821-01	Engerix-B Adult
	NDC		58160-0820-43	Engerix-B Peds
	NDC		58160-0820-01	Engerix-B Peds
	NDC		70461-0002-11	Fluad IIV3 Pres-Free
	NDC		70461-0018-04	Fluad IIV3 Pres-Free
	NDC		58160-0903-41	Fluarix IIV4 Pres-Free
	NDC		58160-0901-41	Fluarix IIV4 Pres-Free
	NDC		58160-0905-41	Fluarix IIV4 Pres-Free
	NDC		58160-0907-41	Fluarix IIV4 Pres-Free
	NDC		58160-0898-41	Fluarix IIV4 Pres-Free
	NDC		58160-0879-41	Fluarix Pres-Free
	NDC		58160-0880-41	Fluarix Pres-Free
	NDC		58160-0881-41	Fluarix Pres-Free
	NDC		42874-0015-01	Flublok RIV3 Pres-Free
	NDC		42874-0014-01	Flublok RIV3 Pres-Free
	NDC		42874-0013-01	Flublok RIV3 Pres-Free
	NDC		42874-0012-01	Flublok RIV3 Pres-Free
	NDC		42874-0016-01	Flublok RIV3 Pres-Free
	NDC		42874-0017-01	Flublok RIV3 Pres-Free
	NDC		42874-0116-01	Flublok RIV4 Pres-Free
	NDC		42874-0117-01	Flublok RIV4 Pres-Free
	NDC		49281-0718-88	Flublok RIV4 Pres-Free
	NDC		63851-0612-11	Flucelvax IIV3 Pres-Free
	NDC		62577-0614-11	Flucelvax IIV3 Pres-Free
	NDC		62577-0613-11	Flucelvax IIV3 Pres-Free
	NDC		70461-0418-11	Flucelvax IIV4
	NDC		70461-0200-11	Flucelvax IIV4 Pres-Free
	NDC		70461-0201-11	Flucelvax IIV4 Pres-Free
	NDC		70461-0318-04	Flucelvax IIV4 Pres-Free
	NDC		19515-0890-02	FluLaval
	NDC		19515-0893-02	FluLaval

Appendix Type	Table	Name	Value	Description
	NDC		19515-0891-01	FluLaval IIV4
	NDC		19515-0898-01	FluLaval IIV4
	NDC		19515-0903-01	FluLaval IIV4
	NDC		19515-0896-01	FluLaval IIV4
	NDC		19515-0900-01	FluLaval IIV4
	NDC		19515-0901-41	FluLaval IIV4 Pres-Free
	NDC		19515-0894-41	FluLaval IIV4 Pres-Free
	NDC		19515-0912-41	FluLaval IIV4 Pres-Free
	NDC		19515-0909-41	FluLaval IIV4 Pres-Free
	NDC		66019-0300-01	FluMist LAIV4
	NDC		66019-0301-01	FluMist LAIV4
	NDC		66019-0304-01	FluMist LAIV4
	NDC		66019-0305-01	FluMist LAIV4
	NDC		66019-0110-01	FluMist
	NDC		66019-0109-01	FluMist
	NDC		66521-0116-11	Fluvirin
	NDC		66521-0117-11	Fluvirin
	NDC		70461-0120-11	Fluvirin
	NDC		66521-0117-12	Fluvirin Pres-Free
	NDC		66521-0116-12	Fluvirin Pres-Free
	NDC		70461-0120-12	Fluvirin Pres-Free
	NDC		49281-0396-78	Fluzone
	NDC		49281-0394-78	Fluzone
	NDC		49281-0392-78	Fluzone
	NDC		49281-0395-88	Fluzone High-Dose
	NDC		49281-0397-88	Fluzone High-Dose
	NDC		49281-0399-88	Fluzone High-Dose
	NDC		49281-0401-88	Fluzone High-Dose
	NDC		49281-0403-88	Fluzone High-Dose
	NDC		49281-0621-78	Fluzone IIV4
	NDC		49281-0623-78	Fluzone IIV4
	NDC		49281-0625-78	Fluzone IIV4
	NDC		49281-0627-78	Fluzone IIV4
	NDC		49281-0629-78	Fluzone IIV4
	NDC		49281-0514-00	Fluzone IIV4 P-Free, Ped
	NDC		49281-0515-00	Fluzone IIV4 P-Free, Ped
	NDC		49281-0516-00	Fluzone IIV4 P-Free, Ped
	NDC		49281-0517-00	Fluzone IIV4 P-Free, Ped
	NDC		49281-0518-00	Fluzone IIV4 P-Free, Ped
	NDC		49281-0414-58	Fluzone IIV4 Pres-Free
	NDC		49281-0414-88	Fluzone IIV4 Pres-Free
	NDC		49281-0415-58	Fluzone IIV4 Pres-Free
	NDC		49281-0415-88	Fluzone IIV4 Pres-Free
	NDC		49281-0416-58	Fluzone IIV4 Pres-Free
	NDC		49281-0416-88	Fluzone IIV4 Pres-Free
	NDC		49281-0417-88	Fluzone IIV4 Pres-Free
	NDC		49281-0417-58	Fluzone IIV4 Pres-Free

Appendix Type	Table	Name	Value	Description
	NDC		49281-0418-88	Fluzone IIV4 Pres-Free
	NDC		49281-0418-58	Fluzone IIV4 Pres-Free
	NDC		49281-0708-48	Fluzone Intradermal IIV4 Pres-Free
	NDC		49281-0712-48	Fluzone Intradermal IIV4 Pres-Free
	NDC		49281-0707-48	Fluzone Intradermal Pres-Free
	NDC		49281-0113-00	Fluzone Pres-Free
	NDC		49281-0013-88	Fluzone Pres-Free
	NDC		49281-0013-58	Fluzone Pres-Free
	NDC		49281-0014-88	Fluzone Pres-Free
	NDC		00006-4121-01	Gardasil 9
	NDC		00006-4119-01	Gardasil 9
	NDC		00006-4109-01	Gardasil
	NDC		00006-4045-01	Gardasil
	NDC		58160-0826-05	Havrix-Adult
	NDC		55045-3841-01	Havrix-Adult
	NDC		58160-0826-43	Havrix-Adult
	NDC		58160-0826-01	Havrix-Adult
	NDC		58160-0825-43	Havrix-Peds 2 Dose
	NDC		58160-0825-01	Havrix-Peds 2 Dose
	NDC		50090-3469-09	HEPLISAV-B
	NDC		43528-0002-01	HEPLISAV-B
	NDC		43528-0003-01	HEPLISAV-B
	NDC		58160-0806-01	Hiberix
	NDC		58160-0816-01	Hiberix
	NDC		58160-0816-05	Hiberix
	NDC		58160-0810-43	Infanrix
	NDC		58160-0810-01	Infanrix
	NDC		49281-0860-88	IPOL
	NDC		42515-0001-00	Ixiaro
	NDC		58160-0812-43	KINRIX
	NDC		58160-0812-01	KINRIX
	NDC		49281-0589-58	Menactra
	NDC		58160-0809-01	MENHIBRIX
	NDC		46028-0218-11	Menveo
	NDC		46028-0219-11	Menveo
	NDC		58160-0959-01	Menveo
	NDC		58160-0958-01	Menveo
	NDC		00006-4681-01	MMR II
	NDC		58160-0811-43	Pediatrix
	NDC		00006-4897-01	PedvaxHIB
	NDC		49281-0545-15	Pentacel
	NDC		49281-0560-05	Pentacel
	NDC		00006-4739-01	Pneumovax 23
	NDC		00006-4737-01	Pneumovax 23
	NDC		00006-4743-01	Pneumovax 23
	NDC		00006-4837-01	Pneumovax 23
	NDC		00005-1971-01	Prevnar 13

Appendix Type	Table	Name	Value	Description
	NDC		00005-1970-49	Prevnar 7
	NDC		00006-4999-01	ProQuad
	NDC		00006-4171-01	ProQuad
	NDC		49281-0562-58	QUADRACEL
	NDC		00006-4992-01	Recombivax-Adult
	NDC		00006-4995-01	Recombivax-Adult
	NDC		00006-4094-01	Recombivax-Adult
	NDC		00006-4093-01	Recombivax-Peds
	NDC		00006-4981-01	Recombivax-Peds
	NDC		58160-0851-01	Rotarix
	NDC		00006-4047-41	ROTATEQ
	NDC		00006-4047-20	ROTATEQ
	NDC		58160-0829-01	SHINGRIX
	NDC		58160-0828-01	SHINGRIX
	NDC		58160-0829-03	SHINGRIX
	NDC		58160-0828-03	SHINGRIX
	NDC		13533-0131-00	TD(GENERIC)
	NDC		17478-0131-00	Td-MassBioLab
	NDC		49281-0215-88	TENIVAC
	NDC		49281-0215-58	TENIVAC
	NDC		49281-0298-10	Tripedia
	NDC		00005-0100-01	Trumenba
	NDC		58160-0815-05	Twinrix
	NDC		58160-0815-43	Twinrix
	NDC		58160-0815-01	Twinrix
	NDC		49281-0790-38	Typhim Vi
	NDC		49281-0790-88	Typhim Vi
	NDC		00006-4841-01	VAQTA-Adult
	NDC		00006-4096-01	VAQTA-Adult
	NDC		00006-4095-01	VAQTA-Peds 2 Dose
	NDC		00006-4831-01	VAQTA-Peds 2 Dose
	NDC		00006-4826-01	Varivax
	NDC		00006-4827-01	Varivax
	NDC		49281-0915-58	YF-VAX
	NDC		49281-0915-68	YF-VAX
	NDC		00006-4963-01	Zostavax

Appendix B: Vaccine, Trade Name and NDC Listing

Important tips before starting:

- Verify that the list of Trade names and associated NCIR Trade name codes are in the EHR system.
- If your Trade Names are not mapped correctly to NCIR Trade Name code in your EHR, the inventory will not be decremented correctly.
- For Administered Vaccines (state supplied or privately purchased vaccines), EHR has to send NCIR Trade Name Code or Package or Unit NDC. Otherwise, the vaccine inventory will not be decremented.
- For Historical vaccines, providing CVX code in the first triplet is recommended. If first triplet populated, the second triplet need not be populated for historical vaccines. If CVX code is not known, any of the following four codes, NDC, Trade name, CPT Code or Vaccine Group Code, can be used for recording historical dose. However, sending CVX in the first triplet is recommended whenever possible and where CVX not available.
- Each vaccine group (ex DTAP) has an unspecified vaccine (ex DTAP unspecified vaccine - CVX 107) to capture historical record of a vaccine administered from the vaccine group when the exact vaccine or Trade name is not known. These unspecified codes are to be used only for recording historical vaccines and only in cases where vaccine name or trade name is not known and only for recording historical vaccines. Unspecified vaccine are listed and highlighted in the tables below.
- Once you have set up your EHR system, provide a listing of Vaccine and Trade Name tables from the EHR to an NCIR Technical Data Analyst for review as noted in the NCIR onboarding process.
- Not all Trade Names have a Package and Unit NDC defined in NCIR. If the Package or Unit NDC field is not listed in the chart below, NCIR does not currently have a Package or Unit NDC value for that Trade Name. Send VTN to deduct in those cases.

The following values support sending CVX+VTN in RXA-5 for decrementing inventory.

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	NCIR TRADE NAME CODE	Manufacturer Code
01	DTP	DTP	DTP	PMC
02	Polio-Oral	ORIMUNE	ORIMUNE	WAL
03	MMR	MMR II	MMR II	MSD
04	Measles-Rubella	Measles-Rubella (MERU)	MEASLES-RUBELLA (MERU)	MSD
04	Measles-Rubella	M-R-VAX	M-R-VAX	MSD
05	Measles	Attenuvax	ATTENUVAX	MSD
05	Measles	Measles	MEASLES	MSD
06	Rubella	Meruvax II	MERUVAX II	MSD
06	Rubella	Rubella	RUBELLA	MSD
07	Mumps	Mumps	MUMPS	MSD
07	Mumps	Mumpsvax	MUMPSVAX	MSD
08	HepB-Peds	Engerix-B Peds	ENGERIX-B PEDS	SKB
08	HepB-Peds	Recombivax-Peds	RECOMBIVAX-PEDS	MSD
09	Td (adult), adsorbed	Td	TD	PMC
09	Td (adult), adsorbed	TD(GENERIC)	TD(GENERIC)	MBL
09	Td (adult), adsorbed	Td-MassBioLab	TD-MASSBIOLAB	MBL
10	Polio-Inject	IPOL	IPOL	PMC
11	Pertussis			
16	FLU whole cell			
17	Hib, unspecified formulation			
18	Rabies-IM	Imovax Rabies IM	IMOVAZ RABIES IM	PMC
18	Rabies-IM	RabAvert	RABAVERT	NOV
19	BCG-BC	BCG-Cancer	BCG-CANCER	OTC
19	BCG-TB	BCG-TB	BCG-TB	OTC
20	DTaP	Acel-Imune	ACEL-IMUNE	WAL
20	DTaP	Certiva	CERTIVA	BAH
20	DTaP	Infanrix	INFANRIX	SKB
20	DTaP	Tripedia	TRIPEDIA	PMC
21	Varicella	Varivax	VARIVAX	MSD
22	DTP-Hib	Tetramune	TETRAMUNE	WAL
23	Plague	Plague	PLAGUE	GRE
24	Anthrax	Anthrax	ANTHRAX	MIP
25	Typhoid-Oral	Berna/Ty21a	BERNA/TY21A	BPC
25	Typhoid-Oral	Vivotif	VIVOTIF	PAX
26	Cholera-Inject	Cholera-I	CHOLERA-I	CHI
28	DT-Peds	DT	DT	PMC
32	Meningococcal Polysaccharide MPSV4	MENOMUNE	MENOMUNE	PMC
33	Pneumococcal Polysaccharide 23	Pneumovax 23	PNEUMOVAX 23	MSD

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	NCIR TRADE NAME CODE	Manufacturer Code
33	Pneumococcal Polysaccharide 23	PNU-IMUNE 23	PNU-IMUNE 23	WAL
35	Tetanus	TT	TT	PMC
37	Yellow Fever	YF-VAX	YF-VAX	PMC
38	Rubella-Mumps	Biavax II	BIAVAX II	MSD
38	Rubella-Mumps	Mumps-Rubella (MURU)	MUMPS-RUBELLA (MURU)	MSD
39	Japanese Encephalitis SC	JE-Vax	JE-VAX	JPN
40	Rabies-ID	Imovax Rabies ID	IMOVAZ RABIES ID	PMC
41	Typhoid-HP	Typhoid	TYPHOID	WAL
43	HepB-Adult	Engerix-B Adult	ENGERIX-B ADULT	SKB
43	HepB-Adult	Recombivax-Adult	RECOMBIVAX-ADULT	MSD
44	HepB-Dialysis 3 dose	Recombivax-Dialysis	RECOMBIVAX-DIALYSIS	MSD
44	HepB-Dialysis 4 dose	Engerix-B dialysis	ENGERIX-B DIALYSIS	SKB
45	Hep B, unspecified formulation			
46	Hib-PRP-D	ProHIBit	PROHIBIT	PMC
47	Hib-HbOC	Hib-TITER	HIB-TITER	WAL
48	Hib-PRP-T	ActHib	ACTHIB	PMC
48	Hib-PRP-T	Hiberix	HIBERIX	SKB
48	Hib-PRP-T	OmniHib	OMNIHIB	PMC
49	Hib-OMP	PedvaxHIB	PEDVAXHIB	MSD
50	DTaP-Hib	TriHIBit	TRIHIBIT	PMC
51	HepB-Hib	Comvax	COMVAX	MSD
52	HepA-Adult	Havrix-Adult	HAVRIX-ADULT	SKB
52	HepA-Adult	VAQTA-Adult	VAQTA-ADULT	MSD
53	Typhoid-AKD	Typhoid-AKD	TYPHOID-AKD	
54	Adeno T4	Adeno T4	ADENO T4	WAL
55	Adeno T7	Adeno T7	ADENO T7	WAL
62	HPV, quadrivalent	Gardasil	GARDASIL	MSD
66	Lyme	LYMERix	LYMERIX	SKB
74	Rotavirus,tetravalent	RotaShield	ROTASHIELD	WAL
75	Smallpox	Dryvax	DRYVAX	WAL
82	Adenovirus, unspecified formulation			
83	HepA-Ped 2 Dose	Havrix-Peds 2 Dose	HAVRIX-PEDS 2 DOSE	SKB
83	HepA-Ped 2 Dose	VAQTA-Peds 2 Dose	VAQTA-PEDS 2 DOSE	MSD
84	HepA-Peds	Havrix-Peds 3 Dose	HAVRIX-PEDS 3 DOSE	SKB
84	HepA-Peds	VAQTA-Peds 3 Dose	VAQTA-PEDS 3 DOSE	MSD
85	Hep A, unspecified formulation			
88	Influenza, unspecified formulation			
89	Polio, unspecified formulation			
90	Rabies, unspecified formulation			

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	NCIR TRADE NAME CODE	Manufacturer Code
91	Typhoid, unspecified formulation			
94	MMRV	ProQuad	PROQUAD	MSD
100	Pneumococcal Conjugate 7	Prevnar 7	PREVNAR 7	WAL
101	Typhoid-ViCPs	Typhim Vi	TYPHIM VI	PMC
103	Meningococcal C conjugate			
104	HepA-HepB Adult	Twinrix	TWINRIX	SKB
105	Vaccinia (smallpox), diluted	Vaccinia, diluted	VACCINIA, DILUTED	
106	DTaP,5 pertussis antigens	DAPTACEL	DAPTACEL	PMC
107	DTaP, unspecified formulation			
108	Meningococcal, unspecified formulation			
109	Pneumococcal, unspecified formulation			
110	DTaP/Polio/Hep B	Pediarix	PEDIARIX	SKB
111	FLU-Nasal	FluMist	FLUMIST	MED
112	Tetanus toxoid, unspecified formulation			
113	Td adult preservative free	DECAVAC	DECAVAC	PMC
113	Td adult preservative free	Td-Pres-Free	TD-PRES-FREE	MBL
113	Td adult preservative free	TENIVAC	TENIVAC	PMC
114	Meningococcal conjugate MCV4P	Menactra	MENACTRA	PMC
115	Tdap	Adacel	ADACEL	PMC
115	Tdap	Boostrix	BOOSTRIX	SKB
116	Rotavirus pentavalent	ROTATEQ	ROTATEQ	MSD
118	HPV, Bivalent	Cervarix	CERVARIX	SKB
119	Rotavirus, monovalent	Rotarix	ROTARIX	SKB
120	Dtap-Hib-IPV	Pentacel	PENTACEL	PMC
121	Zoster vaccine, live	Zostavax	ZOSTAVAX	MSD
122	Rotavirus, unspecified formulation			
125	Novel Influenza-H1N1-09, nasal	H1N1 MedImmune, Nasal	H1N1 MEDIMMUNE, NASAL	MED
126	Novel Influenza-H1N1-09, preserve-free	H1N1 CSL P-Free .25	H1N1 CSL P-FREE .25	CSL
126	Novel Influenza-H1N1-09, preserve-free	H1N1 CSL P-Free .5	H1N1 CSL P-FREE .5	CSL
126	Novel Influenza-H1N1-09, preserve-free	H1N1 Novartis P-Free	H1N1 NOVARTIS P-FREE	NOV
126	Novel Influenza-H1N1-09, preserve-free	H1N1 Sanofi P-Free .25	H1N1 SANOFI P-FREE .25	PMC
126	Novel Influenza-H1N1-09, preserve-free	H1N1 Sanofi P-Free .5	H1N1 SANOFI P-FREE .5	PMC
127	Novel Influenza-H1N1-09	H1N1 CSL	H1N1 CSL	CSL
127	Novel Influenza-H1N1-09	H1N1 IDB	H1N1 IDB	SKB
127	Novel Influenza-H1N1-09	H1N1 Novartis	H1N1 NOVARTIS	NOV
127	Novel Influenza-H1N1-09	H1N1 Sanofi	H1N1 SANOFI	PMC

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	NCIR TRADE NAME CODE	Manufacturer Code
128	Novel Influenza-H1N1-09 all formulations			
129	Japanese Encephalitis, unspecified			
130	DTaP-IPV	KINRIX	KINRIX	SKB
130	DTaP-IPV	Quadracel	QUADRACEL	SKB
133	Pneumococcal Conjugate 13	Prevnar 13	PREVNAR 13	PFR/WAL
134	Japanese Encephalitis IM	Ixiaro	IXIARO	INT
134	Japanese Encephalitis IM	Ixiaro	IXIARO	VAL
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	FLUZONE HIGH-DOSE	PMC
136	Meningococcal conjugate MCV4O	Mencevo	MENVEO	NOV
136	Meningococcal conjugate MCV4O	Mencevo	MENVEO	SKB
137	HPV, unspecified formulation			
138	Td (adult)			
139	Td (adult), unspecified formulation			
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	AFLURIA PRES-FREE	CSL
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	AFLURIA PRES-FREE	SEQ
140	Influenza, seasonal, preservative free	Agriflu Pres-Free	AGRIFLU PRES-FREE	NOV
140	Influenza, seasonal, preservative free	Fluarix Pres-Free	FLUARIX PRES-FREE	SKB
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	FLUVIRIN PRES-FREE	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	FLUVIRIN PRES-FREE	SEQ
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	FLUZONE PRES-FREE	PMC
141	Influenza, seasonal, injectable	AFLURIA	AFLURIA	CSL
141	Influenza, seasonal, injectable	AFLURIA	AFLURIA	SEQ
141	Influenza, seasonal, injectable	FluLaval	FLULALVAL	IDB
141	Influenza, seasonal, injectable	Fluvirin	FLUVIRIN	NOV
141	Influenza, seasonal, injectable	Fluvirin	FLUVIRIN	SEQ
141	Influenza, seasonal, injectable	Fluzone	FLUZONE	PMC
143	Adenovirus types 4 and 7	Adenovirus types 4 and 7	Adenovirus types 4 and 7	MIP
144	Influenza, seasonal, intradermal, p-free	Fluzone Intradermal Pres-Free	FLUZONE INTRADERMAL PF	PMC
147	MCV4, unspecified formulation	MCV4, unspecified formulation	MCV4, UNSPECIFIED	
148	Hib-MenCY-TT	MENHIBRIX	MENHIBRIX	SKB
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	FLUMIST LAIV4	MED
150	Influenza, seasonal, IIV4, IM, pres-free	Afluria IIV4 Pres-Free	AFLURIA IIV4 PRES-FREE	SEQ
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	FLUARIX IIV4 PRES-FREE	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	FluLaval IIV4 Pres-Free	FLULALVAL IIV4 PRES-FREE	IDB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	FLUZONE IIV4 PRES-FREE	PMC

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	NCIR TRADE NAME CODE	Manufacturer Code
151	Influenza nasal, unspecified formulation	Influenza nasal, unspecified formulation	FLU NASAL, UNSPECIFIED	
153	Influenza, seasonal, MDCK, IM, pres-free	Flucelvax IIV3 Pres-Free	FLUCELVAX IIV3 PRES-FREE	NOV
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	FLUBLOK RIV3 PRES-FREE	PSC
158	Influenza, seasonal, IIV4, IM	Afluria IIV4	AFLURIA IIV4	SEQ
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	FLULAVAL IIV4	IDB
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	FLUZONE IIV4	PMC
161	Influenza, seasonal, IIV4, IM, pf, peds	Fluzone IIV4 P-Free, Ped	FLUZONE IIV4 P-FREE, PED	PMC
162	Meningococcal B, recombinant	Trumenba	TRUMENBA	PFR
163	Meningococcal B, OMV	Bexsero	BEXSERO	NOV
163	Meningococcal B, OMV	Bexsero	BEXSERO	SKB
164	Meningococcal B, unspecified formulation			
165	HPV9	Gardasil 9	GARDASIL 9	MSD
166	Influenza, intradermal, IIV4, pres-free	Fluzone Intradermal IIV4 Pres—free	FLUZONE ID IIV4 PF	PMC
167	Meningococcal, unknown serogroup			
168	Influenza, trivalent, adjuvanted	Fluad IIV3 Pres-Free	FLUAD IIV3 PRES-FREE	SEQ
171	Influenza, IIV4, IM, MDCK, pres-free	Flucelvax IIV4 Pres-Free	FLUCELVAX IIV4 PRES-FREE	SEQ
185	Influenza, recombinant, IIV4, IM, p-free	Flublok RIV4 Pres-Free	FLUBLOK RIV4 PRES-FREE	SEQ
186	Influenza, IIV4, IM, MDCK	FLUCELVAX IIV4	FLUCELVAX IIV4	SEQ
187	Zoster recombinant	SHINGRIX	SHINGRIX	SKB
188	Zoster, unspecified formulation			
189	HepB-CpG	HEPLISAV-B	HEPLISAV-B	DVX
	Cholera-Oral	Cholera-O	CHOLERA-O	CHI
	Diphtheria	Diphtheria	DIPHTHERIA	PD

The following values support sending CVX+NDC (Package or Unit) in RXA-5 for decrementing inventory.

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	PACKAGE NDC	UNIT NDC	Manufacturer Code
01	DTP	DTP			PMC
02	Polio-Oral	ORIMUNE			WAL
03	MMR	MMR II	00006-4681-00	00006-4681-01	MSD
04	Measles-Rubella	Measles-Rubella (MERU)			MSD
04	Measles-Rubella	M-R-VAX			MSD
05	Measles	Attenuvax			MSD
05	Measles	Measles			MSD
06	Rubella	Meruvax II			MSD
06	Rubella	Rubella			MSD
07	Mumps	Mumps			MSD

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	PACKAGE NDC	UNIT NDC	Manufacturer Code
07	Mumps	Mumpsvax			MSD
08	HepB-Peds	Engerix-B Peds	58160-0820-52	58160-0820-43	SKB
08	HepB-Peds	Engerix-B Peds	58160-0820-11	58160-0820-01	SKB
08	HepB-Peds	Recombivax-Peds	00006-4093-02	00006-4093-01	MSD
08	HepB-Peds	Recombivax-Peds	00006-4093-09	00006-4093-01	MSD
08	HepB-Peds	Recombivax-Peds	00006-4981-00	00006-4981-01	MSD
09	Td (adult), adsorbed	Td	17478-0131-01	17478-0131-00	PMC
09	Td (adult), adsorbed	TD(GENERIC)	13533-0131-01	13533-0131-00	MBL
09	Td (adult), adsorbed	Td-MassBioLab	14362-0111-04	14362-0111-03	MBL
10	Polio-Inject	IPOL	49281-0860-10	49281-0860-88	PMC
11	Pertussis				
16	FLU whole cell				
17	Hib, unspecified formulation				
18	Rabies-IM	Imovax Rabies IM			PMC
18	Rabies-IM	RabAvert			NOV
19	BCG-BC	BCG-Cancer			OTC
19	BCG-TB	BCG-TB			OTC
20	DTaP	Acel-Imune			WAL
20	DTaP	Certiva			BAH
20	DTaP	Infanrix	58160-0810-52	58160-0810-43	SKB
20	DTaP	Infanrix	58160-0810-11	58160-0810-01	SKB
20	DTaP	Tripedia	49281-0298-10	49281-0298-10	PMC
21	Varicella	Varivax	00006-4826-00	00006-4826-01	MSD
21	Varicella	Varivax	00006-4827-00	00006-4827-01	MSD
22	DTP-Hib	Tetramune			WAL
23	Plague	Plague			GRE
24	Anthrax	Anthrax			MIP
25	Typhoid-Oral	Berna/Ty21a			BPC
25	Typhoid-Oral	Vivotif			PAX
26	Cholera-Inject	Cholera-I			CHI
28	DT-Peds	DT	49281-0225-10	49281-0225-58	PMC
28	DT-Peds	DT	49281-0278-10	49281-0278-10	PMC
32	Meningococcal Polysaccharide MPSV4	MENOMUNE			PMC
33	Pneumococcal Polysaccharide 23	Pneumovax 23	00006-4739-00	00006-4739-01	MSD
33	Pneumococcal Polysaccharide 23	Pneumovax 23	00006-4837-03	00006-4737-01	MSD
33	Pneumococcal Polysaccharide 23	Pneumovax 23	00006-4943-00	00006-4743-01	MSD
33	Pneumococcal Polysaccharide 23	Pneumovax 23	00006-4837-02	00006-4837-01	MSD

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	PACKAGE NDC	UNIT NDC	Manufacturer Code
35	Tetanus	TT			PMC
37	Yellow Fever	YF-VAX	49281-0915-01	49281-0915-58	PMC
37	Yellow Fever	YF-VAX	49281-0915-05	49281-0915-68	PMC
38	Rubella-Mumps	Biavax II			MSD
38	Rubella-Mumps	Mumps-Rubella (MURU)			MSD
39	Japanese Encephalitis SC	JE-Vax			JPN
40	Rabies-ID	Imovax Rabies ID			PMC
41	Typhoid-HP	Typhoid			WAL
43	HepB-Adult	Engerix-B Adult	58160-0821-34	58160-0821-05	SKB
43	HepB-Adult	Engerix-B Adult	58160-0821-52	58160-0821-43	SKB
43	HepB-Adult	Engerix-B Adult	58160-0821-11	58160-0821-01	SKB
43	HepB-Adult	Recombivax-Adult	00006-4992-00	00006-4992-01	MSD
43	HepB-Adult	Recombivax-Adult	00006-4995-00	00006-4995-01	MSD
43	HepB-Adult	Recombivax-Adult	00006-4094-02	00006-4094-01	MSD
43	HepB-Adult	Recombivax-Adult	00006-4094-09	00006-4094-01	MSD
43	HepB-Adult	Recombivax-Adult	00006-4995-41	00006-4995-01	MSD
44	HepB-Dialysis 3 dose	Recombivax-Dialysis			MSD
44	HepB-Dialysis 4 dose	Engerix-B dialysis			SKB
45	Hep B, unspecified formulation				
46	Hib-PRP-D	ProHIBit			PMC
47	Hib-HbOC	Hib-TITER			WAL
48	Hib-PRP-T	ActHib	49281-0545-05	49281-0547-58	PMC
48	Hib-PRP-T	ActHib	49281-0545-03	49281-0547-58 49281-0546-58	PMC
48	Hib-PRP-T	Hiberix	58160-0806-05	58160-0806-01	SKB
48	Hib-PRP-T	Hiberix	58160-0816-05	58160-0816-01	SKB
48	Hib-PRP-T	Hiberix	58160-0818-11	58160-0816-05	SKB
48	Hib-PRP-T	OmniHib			PMC
49	Hib-OMP	PedvaxHIB	00006-4897-00	00006-4897-01	MSD
50	DTaP-Hib	TriHIBit			PMC
51	HepB-Hib	Comvax	00006-4898-00	00006-4898-01	MSD
52	HepA-Adult	Havrix-Adult	58160-0826-34	58160-0826-05	SKB
52	HepA-Adult	Havrix-Adult	55045-3841-01	55045-3841-01	SKB
52	HepA-Adult	Havrix-Adult	58160-0826-52	58160-0826-43	SKB
52	HepA-Adult	Havrix-Adult	58160-0826-11	58160-0826-01	SKB
52	HepA-Adult	Vaqta-Adult	00006-4841-00	00006-4841-01	MSD
52	HepA-Adult	Vaqta-Adult	00006-4096-02	00006-4096-01	MSD
52	HepA-Adult	Vaqta-Adult	00006-4841-41	00006-4841-01	MSD
52	HepA-Adult	Vaqta-Adult	00006-4096-09	00006-4096-01	MSD
53	Typhoid-AKD	Typhoid-AKD			

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54	Adeno T4	Adeno T4			WAL
55	Adeno T7	Adeno T7			WAL
62	HPV, quadrivalent	Gardasil	00006-4109-02	00006-4109-01	MSD
62	HPV, quadrivalent	Gardasil	00006-4109-09	00006-4109-01	MSD
62	HPV, quadrivalent	Gardasil	00006-4045-00	00006-4045-01	MSD
62	HPV, quadrivalent	Gardasil	00006-4045-41	00006-4045-01	MSD
66	Lyme	LYMEmrix			SKB
74	Rotavirus,tetravalent	RotaShield			WAL
75	Smallpox	Dryvax			WAL
82	Adenovirus, unspecified formulation				
83	HepA-Ped 2 Dose	Havrix-Peds 2 Dose	58160-0825-52	58160-0825-43	SKB
83	HepA-Ped 2 Dose	Havrix-Peds 2 Dose	58160-0825-11	58160-0825-01	SKB
83	HepA-Ped 2 Dose	VAQTA-Peds 2 Dose	00006-4095-02	00006-4095-01	MSD
83	HepA-Ped 2 Dose	VAQTA-Peds 2 Dose	00006-4095-09	00006-4095-01	MSD
83	HepA-Ped 2 Dose	VAQTA-Peds 2 Dose	00006-4831-41	00006-4831-01	MSD
84	HepA-Peds	Havrix-Peds 3 Dose	HAVRIX-PEDS 3 DOSE		SKB
84	HepA-Peds	VAQTA-Peds 3 Dose	VAQTA-PEDS 3 DOSE		MSD
85	Hep A, unspecified formulation				
88	Influenza, unspecified formulation				
89	Polio, unspecified formulation				
90	Rabies, unspecified formulation				
91	Typhoid, unspecified formulation				
94	MMRV	ProQuad	00006-4999-00	00006-4999-01	MSD
94	MMRV	ProQuad	00006-4171-00	00006-4171-01	MSD
100	Pneumococcal Conjugate 7	Prevnar 7	00005-1970-50	00005-1970-49	WAL
101	Typhoid-VICPs	Typhim Vi	49281-0790-51	49281-0790-38	PMC
101	Typhoid-VICPs	Typhim Vi	49281-0790-20	49281-0790-88	PMC
103	Meningococcal C conjugate				
104	HepA-HepB Adult	Twinrix	58160-0815-34	58160-0815-05	SKB
104	HepA-HepB Adult	Twinrix	58160-0815-52	58160-0815-43	SKB
104	HepA-HepB Adult	Twinrix	58160-0815-11	58160-0815-01	SKB
104	HepA-HepB Adult	Twinrix	58160-0815-48	58160-0815-43	SKB
105	Vaccinia (smallpox), diluted	Vaccinia, diluted			
106	DTaP,5 pertussis antigens	DAPTACEL	49281-0286-01	49281-0286-58	PMC
106	DTaP,5 pertussis antigens	DAPTACEL	49281-0286-05	49281-0286-58	PMC
106	DTaP,5 pertussis antigens	DAPTACEL	49281-0286-10	49281-0286-58	PMC

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107	DTaP, unspecified formulation				
108	Meningococcal, unspecified formulation				
109	Pneumococcal, unspecified formulation				
110	DTaP/Polio/Hep B	Pediarix	58160-0811-52	58160-0811-43	SKB
111	FLU-Nasal	FluMist	66019-0110-10	66019-0110-01	MED
111	FLU-Nasal	FluMist	66019-0109-10	66019-0109-01	MED
112	Tetanus toxoid, unspecified formulation				
113	Td adult preservative free	DECAVAC	49281-0291-83	49281-0291-83	PMC
113	Td adult preservative free	DECAVAC	49281-0291-10	49281-0291-10	PMC
113	Td adult preservative free	Td-Pres-Free			MBL
113	Td adult preservative free	TENIVAC	49281-0215-15	49281-0215-88	PMC
113	Td adult preservative free	TENIVAC	49281-0215-10	49281-0215-58	PMC
114	Meningococcal conjugate MCV4P	Menactra	49281-0589-05	49281-0589-58	PMC
115	Tdap	Adacel	49281-0400-05	49281-0400-58	PMC
115	Tdap	Adacel	49281-0400-15	49281-0400-88	PMC
115	Tdap	Adacel	49281-0400-10	49281-0400-58	PMC
115	Tdap	Adacel	49281-0400-20	49281-0400-89	PMC
115	Tdap	Boostrix	58160-0842-34	58160-0842-05	SKB
115	Tdap	Boostrix	58160-0842-52	58160-0842-43	SKB
115	Tdap	Boostrix	58160-0842-11	58160-0842-01	SKB
116	Rotavirus pentavalent	ROTATEQ	00006-4047-41	00006-4047-41	MSD
116	Rotavirus pentavalent	ROTATEQ	00006-4047-20	00006-4047-20	MSD
118	HPV, Bivalent	Cervarix	58160-0830-34	58160-0830-05	SKB
118	HPV, Bivalent	Cervarix	58160-0830-52	58160-0830-43	SKB
119	Rotavirus, monovalent	Rotarix	58160-0854-52	58160-0851-01	SKB
120	Dtap-Hib-IPV	Pentacel	49281-0510-05	49281-0545-15	PMC
120	Dtap-Hib-IPV	Pentacel	49281-0510-05	49281-0560-05	PMC
121	Zoster vaccine, live	Zostavax	00006-4963-00	00006-4963-01	MSD
121	Zoster vaccine, live	Zostavax	00006-4963-41	00006-4963-01	MSD
122	Rotavirus, unspecified formulation				
125	Novel Influenza-H1N1-09, nasal	H1N1 MedImmune, Nasal			MED
126	Novel Influenza-H1N1-09, preserve-free	H1N1 CSL P-Free .25			CSL
126	Novel Influenza-H1N1-09, preserve-free	H1N1 CSL P-Free .5			CSL
126	Novel Influenza-H1N1-09, preserve-free	H1N1 Novartis P-Free			NOV
126	Novel Influenza-H1N1-09, preserve-free	H1N1 Sanofi P-Free .25			PMC

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126	Novel Influenza-H1N1-09, preserve-free	H1N1 Sanofi P-Free .5			PMC
127	Novel Influenza-H1N1-09	H1N1 CSL			CSL
127	Novel Influenza-H1N1-09	H1N1 IDB			SKB
127	Novel Influenza-H1N1-09	H1N1 Novartis			NOV
127	Novel Influenza-H1N1-09	H1N1 Sanofi			PMC
128	Novel Influenza-H1N1-09 all formulations				
129	Japanese Encephalitis, unspecified				
130	DTaP-IPV	KINRIX	58160-0812-52	58160-0812-43	SKB
130	DTaP-IPV	KINRIX	58160-0812-11	58160-0812-01	SKB
130	DTaP-IPV	Quadracel	49281-0562-10	49281-0562-58	SKB
133	Pneumococcal Conjugate 13	Prevnar 13	00005-1971-04	00005-1971-01	PFR/WAL
133	Pneumococcal Conjugate 13	Prevnar 13	00005-1971-05	00005-1971-01	PFR/WAL
133	Pneumococcal Conjugate 13	Prevnar 13	00005-1971-02	00005-1971-01	PFR/WAL
134	Japanese Encephalitis IM	Ixiaro	42515-0001-01	42515-0001-00	INT
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	49281-0395-65	49281-0395-88	PMC
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	49281-0397-65	49281-0397-88	PMC
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	49281-0399-65	49281-0399-88	PMC
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	49281-0401-65	49281-0401-88	PMC
135	Influenza, High-Dose Seasonal	Fluzone High-Dose	49281-0403-65	49281-0403-88	PMC
136	Meningococcal conjugate MCV4O	Menveo	46028-0208-01	46028-0218-11	NOV
136	Meningococcal conjugate MCV4O	Menveo	46028-0208-01	46028-0219-11	NOV
136	Meningococcal conjugate MCV4O	Menveo	58160-0955-09	58160-0959-01	SKB
136	Meningococcal conjugate MCV4O	Menveo	58160-0955-09	58160-0958-01	SKB
137	HPV, unspecified formulation				
138	Td (adult)				
139	Td (adult), unspecified formulation				
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	33332-0013-01	33332-0013-02	CSL
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	33332-0014-01	33332-0014-02	CSL
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	33332-0015-01	33332-0015-02	CSL
140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	33332-0016-01	33332-0016-02	SEQ

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140	Influenza, seasonal, preservative free	AFLURIA Pres-Free	33332-0017-01	33332-0017-02	SEQ
140	Influenza, seasonal, preservative free	Agriflu Pres-Free			NOV
140	Influenza, seasonal, preservative free	Fluarix Pres-Free	58160-0879-52	58160-0879-41	SKB
140	Influenza, seasonal, preservative free	Fluarix Pres-Free	58160-0880-52	58160-0880-41	SKB
140	Influenza, seasonal, preservative free	Fluarix Pres-Free	58160-0881-52	58160-0881-41	SKB
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	66521-0117-02	66521-0117-12	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	66521-0118-02	66521-0118-12	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	66521-0114-02	76420-0482-01	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	66521-0115-02	66521-0115-02	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	66521-0116-02	66521-0116-12	NOV
140	Influenza, seasonal, preservative free	Fluvirin Pres-Free	70461-0120-02	70461-0120-12	SEQ
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0111-25	49281-0111-25	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0112-25	49281-0112-25	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0113-25	49281-0113-00	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0012-50	49281-0012-50	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0012-10	49281-0012-10	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0011-10	49281-0011-10	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0011-50	49281-0011-50	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0013-50	49281-0013-88	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0013-10	49281-0013-58	PMC
140	Influenza, seasonal, preservative free	Fluzone Pres-Free	49281-0014-50	49281-0014-88	PMC
141	Influenza, seasonal, injectable	Fluvirin	66521-0112-10	66521-0112-10	NOV
141	Influenza, seasonal, injectable	Fluvirin	66521-0115-10	66521-0115-10	NOV
141	Influenza, seasonal, injectable	Fluvirin	66521-0113-10	66521-0113-10	NOV
141	Influenza, seasonal, injectable	Fluvirin	66521-0118-10	66521-0118-11	NOV
141	Influenza, seasonal, injectable	Fluvirin	66521-0116-10	66521-0116-11	NOV
141	Influenza, seasonal, injectable	Fluvirin	66521-0117-10	66521-0117-11	NOV

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141	Influenza, seasonal, injectable	Fluvirin	66521-0114-10	66521-0114-10	NOV
141	Influenza, seasonal, injectable	Fluvirin	70461-0120-10	70461-0120-11	SEQ
141	Influenza, seasonal, injectable	AFLURIA	33332-0113-10	33332-0113-11	CSL
141	Influenza, seasonal, injectable	AFLURIA	33332-0114-10	33332-0114-11	CSL
141	Influenza, seasonal, injectable	AFLURIA	33332-0115-10	33332-0115-11	CSL
141	Influenza, seasonal, injectable	AFLURIA	33332-0116-10	33332-0116-11	SEQ
141	Influenza, seasonal, injectable	AFLURIA	33332-0117-10	33332-0117-11	SEQ
141	Influenza, seasonal, injectable	FluLaval	19515-0890-07	19515-0890-02	IDB
141	Influenza, seasonal, injectable	FluLaval	19515-0893-07	19515-0893-02	IDB
141	Influenza, seasonal, injectable	Fluzone	49281-0396-15	49281-0396-78	PMC
141	Influenza, seasonal, injectable	Fluzone	49281-0394-15	49281-0394-78	PMC
141	Influenza, seasonal, injectable	Fluzone	49281-0388-15	49281-0388-15	PMC
141	Influenza, seasonal, injectable	Fluzone	49281-0390-15	49281-0390-15	PMC
141	Influenza, seasonal, injectable	Fluzone	49281-0392-15	49281-0392-78	PMC
143	Adenovirus types 4 and 7	Adenovirus types 4 and 7			MIP
144	Influenza, seasonal, intradermal, p-free	Fluzone Intradermal Pres-Free	49281-0703-55	49281-0703-55	PMC
144	Influenza, seasonal, intradermal, p-free	Fluzone Intradermal Pres-Free	49281-0707-55	49281-0707-48	PMC
147	MCV4, unspecified formulation	MCV4, unspecified formulation			
148	Hib-MenCY-TT	MENHIBRIX	58160-0809-05	58160-0809-01	SKB
148	Hib-MenCY-TT	MENHIBRIX	58160-0801-11	58160-0809-01	SKB
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	66019-0300-10	66019-0300-01	MED
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	66019-0301-10	66019-0301-01	MED
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	66019-0302-10	66019-0302-01	MED
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	66019-0304-10	66019-0304-01	MED
149	Influenza, seasonal, LAIV4, IN	FluMist LAIV4	66019-0305-10	66019-0305-01	MED
150	Influenza, seasonal, IIV4, IM, pres-free	Afluria IIV4 Pres-Free	33332-0316-01	33332-0316-02	SEQ
150	Influenza, seasonal, IIV4, IM, pres-free	Afluria IIV4 Pres-Free	33332-0317-01	33332-0317-02	SEQ
150	Influenza, seasonal, IIV4, IM, pres-free	Afluria IIV4 Pres-Free	33332-0318-01	33332-0318-02	SEQ

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150	Influenza, seasonal, IIV4, IM, pres-free	Afluria IIV4 Pres-Free	33332-0218-20	33332-0218-21	SEQ
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	58160-0903-52	58160-0903-41	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	58160-0901-52	58160-0901-41	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	58160-0905-52	58160-0905-41	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	58160-0907-52	58160-0907-41	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluarix IIV4 Pres-Free	58160-0898-52	58160-0898-41	SKB
150	Influenza, seasonal, IIV4, IM, pres-free	FluLaval IIV4 Pres-Free	19515-0901-52	19515-0901-41	IDB
150	Influenza, seasonal, IIV4, IM, pres-free	FluLaval IIV4 Pres-Free	19515-0894-52	19515-0894-41	IDB
150	Influenza, seasonal, IIV4, IM, pres-free	FluLaval IIV4 Pres-Free	19515-0912-52	19515-0912-41	IDB
150	Influenza, seasonal, IIV4, IM, pres-free	FluLaval IIV4 Pres-Free	19515-0909-52	19515-0909-41	IDB
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0414-10	49281-0414-58	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0414-50	49281-0414-88	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0415-50	49281-0415-88	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0415-10	49281-0415-58	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0416-10	49281-0416-58	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0416-50	49281-0416-88	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0417-50	49281-0417-88	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0417-10	49281-0417-58	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0418-50	49281-0418-88	PMC
150	Influenza, seasonal, IIV4, IM, pres-free	Fluzone IIV4 Pres-Free	49281-0418-10	49281-0418-58	PMC
151	Influenza nasal, unspecified formulation	Influenza nasal, unspecified formulation			
153	Influenza, seasonal, MDCK, IM, pres-free	Flucelvax IIV3 Pres-Free	63851-0612-01	63851-0612-11	NOV
153	Influenza, seasonal, MDCK, IM, pres-free	Flucelvax IIV3 Pres-Free	62577-0614-01	62577-0614-11	NOV
153	Influenza, seasonal, MDCK, IM, pres-free	Flucelvax IIV3 Pres-Free	62577-0613-01	62577-0613-11	NOV
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0015-10	42874-0015-01	PSC
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0014-10	42874-0014-01	PSC
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0013-10	42874-0013-01	PSC

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155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0012-10	42874-0012-01	PSC
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0016-10	42874-0016-01	PSC
155	Influenza, recombinant, seasonal, IM, pf	Flublok RIV3 Pres-Free	42874-0017-10	42874-0017-01	PSC
158	Influenza, seasonal, IIV4, IM	Afluria IIV4	33332-0416-10	33332-0416-11	SEQ
158	Influenza, seasonal, IIV4, IM	Afluria IIV4	33332-0417-10	33332-0417-11	SEQ
158	Influenza, seasonal, IIV4, IM	Afluria IIV4	33332-0418-10	33332-0418-11	SEQ
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	19515-0891-11	19515-0891-01	IDB
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	19515-0898-11	19515-0898-01	IDB
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	19515-0903-11	19515-0903-01	IDB
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	19515-0896-11	19515-0896-01	IDB
158	Influenza, seasonal, IIV4, IM	FluLaval IIV4	19515-0900-11	19515-0900-01	IDB
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	49281-0621-15	49281-0621-78	PMC
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	49281-0623-15	49281-0623-78	PMC
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	49281-0625-15	49281-0625-78	PMC
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	49281-0627-15	49281-0627-78	PMC
158	Influenza, seasonal, IIV4, IM	Fluzone IIV4	49281-0629-15	49281-0629-78	PMC
161	Influenza, seasonal, IIV4, IM, pf, peds	Fluzone IIV4 P-Free, Ped	49281-0514-25	49281-0514-00	PMC
161	Influenza, seasonal, IIV4, IM, pf, peds	Fluzone IIV4 P-Free, Ped	49281-0515-25	49281-0515-00	PMC
161	Influenza, seasonal, IIV4, IM, pf, peds	Fluzone IIV4 P-Free, Ped	49281-0516-25	49281-0516-00	PMC
161	Influenza, seasonal, IIV4, IM, pf, peds	Fluzone IIV4 P-Free, Ped	49281-0517-25	49281-0517-00	PMC
162	Meningococcal B, recombinant	Trumenba	00005-0100-10	00005-0100-01	PFR
162	Meningococcal B, recombinant	Trumenba	00005-0100-05	00005-0100-01	PFR
163	Meningococcal B, OMV	Bexsero	46028-0114-02	46028-0114-11	NOV
163	Meningococcal B, OMV	Bexsero	46028-0114-01	46028-0114-11	NOV
163	Meningococcal B, OMV	Bexsero	58160-0976-20	58160-0976-02	SKB
163	Meningococcal B, OMV	Bexsero	58160-0976-06	58160-0976-02	SKB
164	Meningococcal B, unspecified formulation				
165	HPV9	Gardasil 9	00006-4121-02	00006-4121-01	MSD
165	HPV9	Gardasil 9	00006-4119-02	00006-4119-01	MSD
165	HPV9	Gardasil 9	00006-4119-03	00006-4119-01	MSD
166	Influenza, intradermal, IIV4, pres-free	Fluzone Intradermal IIV4 Pres—free	49281-0708-40	49281-0708-48	PMC
166	Influenza, intradermal, IIV4, pres-free	Fluzone Intradermal IIV4 Pres—free	49281-0712-40	49281-0712-48	PMC
167	Meningococcal, unknown serogroup				

CVX CODE	NCIR VACCINE NAME / SHORT NAME	PRODUCT TRADE NAME	PACKAGE NDC	UNIT NDC	Manufacturer Code
168	Influenza, trivalent, adjuvanted	Fluad IIV3 Pres-Free			SEQ
168	Influenza, trivalent, adjuvanted	Fluad IIV3 Pres-Free	70461-0002-01	70461-0002-11	SEQ
168	Influenza, trivalent, adjuvanted	Fluad IIV3 Pres-Free	70461-0018-03	70461-0018-04	SEQ
171	Influenza, IIV4, IM, MDCK, pres-free	Flucelvax IIV4 Pres-Free	70461-0200-01	70461-0200-11	SEQ
171	Influenza, IIV4, IM, MDCK, pres-free	Flucelvax IIV4 Pres-Free	70461-0201-01	70461-0201-11	SEQ
171	Influenza, IIV4, IM, MDCK, pres-free	Flucelvax IIV4 Pres-Free	70461-0318-03	70461-0318-04	SEQ
185	Influenza, recombinant, IIV4, IM, p-free	Flublok RIV4 Pres-Free	42874-0116-10	42874-0116-01	PSC
185	Influenza, recombinant, IIV4, IM, p-free	Flublok RIV4 Pres-Free	42874-0017-10	42874-0117-01	PSC
185	Influenza, recombinant, IIV4, IM, p-free	Flublok RIV4 Pres-Free	49281-0718-10	49281-0718-88	PSC
186	Influenza, IIV4, IM, MDCK	FLUCELVAX IIV4	70461-0418-10	70461-0418-11	SEQ
187	Zoster recombinant	SHINGRIX	58160-0819-12	58160-0829-01	SKB
187	Zoster recombinant	SHINGRIX	58160-0819-12	58160-0828-01	SKB
187	Zoster recombinant	SHINGRIX	58160-0823-11	58160-0829-03	SKB
187	Zoster recombinant	SHINGRIX	58160-0823-11	58160-0828-03	SKB
188	Zoster, unspecified formulation				
189	HepB-CpG	HEPLISAV-B	50090-3469-00	50090-3469-09	DVX
189	HepB-CpG	HEPLISAV-B	43528-0002-05	43528-0002-01	DVX
189	HepB-CpG	HEPLISAV-B	43528-0003-05	43528-0003-01	DVX
	Cholera-Oral	Cholera-O			CHI
	Diphtheria	Diphtheria			PD

Appendix C: Guidance on Vaccine Deferral – Client Comments and Refusals

Section 1 – Description and Examples

There are two types of vaccine deferral: Refusal (including client/parent refusal or religious exemption), and Client Comment (valid medical condition). These two deferral scenarios are submitted in differing format, as shown in the examples below. Client comment values are submitted in OBX-3.

Note the difference in submission protocol between parent refusal, religious exemption and client comments. Parent refusals and religious exemption are sent in an RXA segment. Client comments (immunity, reactions, and special indications) are sent in an OBX segment. Since the OBX requires a corresponding RXA, client comments can be submitted by using the “No Vaccine Administered” RXA (see examples below).

Parent Refusal and Religious Exemption:

Submit these scenarios in an RXA segment. (Reference Appendix A for NCIR accepted Parent Refusals and Religious Exemptions.)

Example:

```
RXA|0|999|20110425|20110425|03^MMR^CVX^^|999|||||||00^PARENTAL REFUSAL^NIP002|RE|A|
RXA|0|999|20110425|20110425|28^DT^CVX^^|999|||||||01^RELIGIOUS EXEMPTION^NIP002|RE|A|
```

Client Comments:

Client comments can be sent without a dose using the “No Vaccine Administered” RXA segment. In the following example, ‘CCYYMMDD’ represents the current date:

```
RXA|0|1|CCYYMMDD|CCYYMMDD|998^No Vaccine Administered^CVX|999|||^No vaccine Administered^^
```

Include the Client Comment/Reaction/Special Indication in the OBX corresponding to the “No Vaccine Administered” RXA segment (See Appendix A for NCIR accepted Client Comment, Reaction and Special Indication codes):

Example:

```
OBX|1|CE|30945-0^Contraindication^LN|1|91930004^Allergy Egg^SCT^^|||||F|||20100101|
OBX|1|CE|31044-1^Reaction^LN|2|39579001^Anaphylaxis^CDCPHINVS^^|||||F|||20100101|
OBX|1|CE|59785-6^Special^LN|3|VXC7^Rabies Exposure^CDCPHINVS^^|||||F|||20100101|
OBX|1|CE|59784-9^Disease with presumed immunity^LN^^|4|38907003^Immunity: Varicella – Provider Verified History^SCT^^|||||F|||20121219|||||20201231|||||
```

Section 2 -Client Comment List

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
		Contraindications	
30945-0	01	L	Recipient condition - unspecified
30945-0	02	L	Household condition - unspecified
30945-0	11	L	Collapse or shock like State within 48 hours of previous dose of DTP/DTaP
30945-0	12	L	Convulsions (fits, seizures) within 3 days of previous dose of DTP/DTaP

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
30945-0	13	L	Persistent, inconsolable crying lasting 3 hours within 48 hours of previous dose of DTP/DTaP
30945-0	17	L	Fever >= 40.5° C (105° F) within 48 hours of previous dose of DTP/DTaP
30945-0	18	L	Guillain-Barré Syndrome (GBS) within 6 weeks after DTP/DTaP
30945-0	42	L	Household contact of infant < 6 months
30945-0	43	L	High risk condition for influenza
30945-0	VXC18	CDCPHINVS	Allergy to baker's yeast (anaphylactic)
30945-0	VXC19	CDCPHINVS	Allergy to Thimerosal - refer to package insert (anaphylactic)
30945-0	VXC20	CDCPHINVS	Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic)
30945-0	VXC22	CDCPHINVS	Encephalopathy within 7 days of previous dose of DTP or DTaP
30945-0	VXC24	CDCPHINVS	Current acute illness, moderate to severe (with or without fever)
30945-0	R1	L	Clinician has decided to repeat the DTaP series
30945-0	R2	L	Clinician has decided to repeat the Hep B series
30945-0	R3	L	Clinician has decided to repeat the HIB series
30945-0	R4	L	Clinician has decided to repeat the Polio series
30945-0	R5	L	Clinician has decided to repeat the MMR series
30945-0	R6	L	Clinician has decided to repeat the Pneumococcal series
30945-0	R7	L	Clinician has decided to repeat the Varicella series
30945-0	R8	L	Clinician has decided to repeat the Meningo Series
30945-0	R9	L	Clinician has decided to repeat the Rotavirus series
30945-0	R10	L	Clinician has decided to repeat the HPV series
30945-0	R11	L	Clinician has decided to repeat the HepA series
30945-0	R12	L	Clinician has decided to repeat the Zoster series
30945-0	R13	L	Clinician has decided to repeat the Influenza series
30945-0	27624003		Chronic illness
30945-0	294466005	SCT	Allergy to Streptomycin (anaphylactic)
30945-0	294468006	SCT	Allergy to neomycin (anaphylactic)
30945-0	294847001	SCT	Allergy to gelatin (anaphylactic)

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
30945-0	77386006	SCT	Pregnancy (in recipient) - refer to CDC guidelines for vaccinating pregnant women
30945-0	91930004	SCT	Allergy to egg ingestion (anaphylactic)
		DISEASE WITH PRESUMED IMMUNITY	
59784-9	33	L	Immunity: Varicella – Evidence prior to 7/1/2015, Laboratory-tested or History of varicella disease (Chicken pox)
59784-9	44	L	Immunity: Varicella – Laboratory-tested Confirmation
59784-9	38907003	SCT	Immunity: Varicella – Provider Verified History
		DISEASES WITH SEROLOGICAL EVIDENCE OF IMMUNITY	
75505-8	371113008	SCT	Serology confirmed varicella
75505-8	371111005	SCT	Serology confirmed measles
75505-8	278968001	SCT	Serology confirmed rubella
75505-8	341112003	SCT	Serology confirmed mumps
		EXPOSURE TO RABIES	
59785-6	VXC7	CDCPHINVS	Client has been exposed to rabies
		REACTION CODE	
31044-1	VXC9	CDCPHINVS	Persistent, inconsolable crying lasting > 3 hours within 48 hours of dose
31044-1	VXC10	CDCPHINVS	Collapse or shock-like state within 48 hours of dose
31044-1	VXC11	CDCPHINVS	convulsions (fits, seizures) within 72 hours of dose
31044-1	VXC12	CDCPHINVS	fever of > 40.5C (105F) within 48 hours of dose
31044-1	VXC13	CDCPHINVS	Guillain-Barre syndrome (GBS) within 6 weeks
31044-1	39579001	SCT	Allergic reaction to this vaccine or to any of its unlisted vaccine components (anaphylactic)
31044-1	81308009	SCT	ENCEPHALOPATHY within 7 DAYS

Note: State approved Medical Exemption and State approved Clinical studies for the vaccine groups are allowed to be entered only through the UI. If you receive data from the NCIR (either VXU back to your system or RSP in response to QBP), you will receive the exemptions and clinical studies information from the NCIR. Please check QBP/RSP NCLIG for these codes.

Appendix D: Guidance on Usage and Example Messages

Example VXU -Basic transmission for new immunization administered and patient comment added:

Storyboard:

Bart Patient (male), born 12/31/11 was administered a single dose of Varicella on 12/17/12. The vaccine was paid for with state funds and was deducted from the provider's inventory. Additionally, a patient comment was added to the child's record stating of a presumed immunity to Measles. The patient was brought into the provider's office by his mother, Carol Tester. They reside at 52 Main, Anycity, NC 27000. Kevin Clinician administered the following shot, added an accompanying comment, and recorded on 12/18/2012:

- Varicella Live(Varivax), lot # testlot1, vaccine expiration date of 12262015
- Comment: Immunity: Measles

Note that we will indicate the end of each segment with a <CR>. Segments may wrap around in this document. We will insert a blank line between each segment for increased readability.

MSH|~\&|COUNTY HD|NCIR-SHORT-ORG|IIS|NCIR|20121212100101-0500||VXU^V04^VXU_V04|1|P^2.5.1|||ER|AL||||Z22^CDCPHINVS|NCIR-SHORT-ORG|NCIR<CR>

PID|1||202^NCIR-SHORT-
ORG^PI^||PATIENT^BART^A^L^|TESTER^CAROL^M^|20111231|M|||||||2186-5^Not Hispanic or
Latino^CDCREC||N|1|||N|||||||<CR>

PD1|||||||02|N|||A|20121218134335||||<CR>

NK1|1|TESTER^CAROL^A^L^|MTH^MOTHER^HL70063^|52 MAIN^Anycity^NC^27850^|PRN^PH^
^608^2246872^|eng^English||02|||||||Y<CR>

ORC|RE||1|||||||^KDS Org^|||||||<CR>

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella
Live^VTN|1.0|ML^MILLILITERS^UCUM||00^New Immunization^NIP001|
^Clinician^Kevin^L^|SITE-22046|||testlot1|20151226|MSD^Merck^MVX|||CPI|A||||<CR>

RXR|C38238^Intramuscular^NCIT|LA^Left Arm^HL70163||||<CR>

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC50^State Funds^CDCPHINVS|||||F|||20121217|<CR>

OBX|2|CE|30956-7^ VACCINE TYPE^LN|2|21^Varicella^CVX|||||F|||||||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT
PUBLISHED^LN|2|2011108||||F|||20110410||||||||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT
PRESENTED^LN|2|20110410||||F|||20110410||||||||

OBX|5|CE|64994-7^Vaccine fund pgm elig cat^LN|3|V02^Medicaid^HL70064||||F|||20110410|||VXC41^per visit^CDCPHINVS||||||

OBX|2|CE|59784-9^Disease with presumed immunity^LN^^|4|14189004^History of measles infection^SCT^^|||||F|||20121217|||20201231||||<CR>

Example VXU –Historical dose

MSH|~\&|COUNTY HD|Test Org|IIS|NCIR|20121212100101-
0500||VXU^V04^VXU_V04|1|P^2.5.1||ER|AL|||Z22^CDCPHINVS|NCIR-SHORT-ORG|NCIR<CR>
PID|1||202^Test Org^PI^||PATIENT^BART^A^^L^|TESTER^CAROL^L^|20111231|M|||||||2186-5^Not
Hispanic or Latino^CDCREC||N|1|||N|||||||<CR>
PD1|||||||02|N|||A|20121218134335|||<CR>
ORC|RE||1|||||||^KDS Org^^||||||||<CR>
RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella
Live^VTN|1.0|ML^MILLILITERS^UCUM||01^Historical^NIP001|||||||CP|A|||<CR>

Example VXU – Private funded dose

MSH|~\&|COUNTY HD|Test Org|IIS|NCIR|20121212100101-
0500||VXU^V04^VXU_V04|1|P^2.5.1||ER|AL|||Z22^CDCPHINVS|NCIR-SHORT-ORG|NCIR<CR>
PID|1||202^Test Org^PI^||PATIENT^BART^A^^L^|TESTER^CAROL^L^|20111231|M|||||||2186-5^Not
Hispanic^CDCREC||N|1|||N|||||||<CR>
PD1|||||||02|N|||A|20121218134335|||<CR>
ORC|RE||1|||||||^KDS Org^^||||||||<CR>
RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella
Live^VTN|1.0|ML^MILLILITERS^UCUM||00^New Immunization^NIP001|Clinician^Kevin^L|^SITE-
22046|||testlot1|20151226|MSD^Merck^MVX||CP|A|||<CR>
RXR|C28161^Intramuscular^NCIT|LA^Left Arm^HL70163|||<CR>
OBX|1|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^CDCPHINVS^^|||||
F|||20121217|<CR>

OBX|2|CE|30956-7^VACCINE TYPE^LN|2|21^Varicella^CVX||||F|||||||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT
PUBLISHED^LN|2|2011108||||F|||20110410||||||||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT
PRESENTED^LN|2|20110410||||F|||20110410||||||||

OBX|5|CE|64994-7^Vaccine fund pgm elig cat^LN|3|NCA01^Insured^HL70064|||||F|||20110410|||VXC41^per visit^CDCPHINVS||||||

Example VXU – Combination Vaccine

MSH|^~\&|COUNTY HD|Test Org|IIS|NCIR|201212100101-0500||VXU^V04^VXU_V04|1|P^2.5.1|||ER|AL||||Z22^CDCPHINVS|NCIR-SHORT-ORG|NCIR<CR>
PID|1||202^Test Org^PI^||PATIENT^BART^A^L^|TESTER^CAROL^L^|20111231|M|||||||2186-5^Not Hispanic^CDCREC||N1||||N||||||<CR>
PD1|||||||02|N|||A|20121218134335|||<CR>
ORC|RE||1|||||||^KDS Org^M|||<CR>
RXA|0|1|20110108|20110108|120^Dtap-Hib-
IPV^CVX^PENTACEL^VTN|0.5|ML^MILLILITERS^UCUM||00^New^NIP001^Smith^Games^L|^^SITE-21959^|||102321 |20201010|PMC^PMC^MVX^|||CP||||

RXR| C28161^INTRAMUSCULAR^NCIT^|LA^HL70163^|||||

OBX|1|CE|30963-3^VACCINE PURCHASED WITH^LN|1|VXC50^Public Funds^CDCPHINVS^|||||F|||20110108||||||

OBX|2|CE|64994-7^Vaccine fund pgm elig cat^LN|2|V02^Medicaid^HL70064|||||F|||20110108|||VXC41^per visit^CDCPHINVS||||||

OBX|3|CE|30956-7^VACCINE TYPE^LN|3|107^DTaP^CVX|||||F|||||||

OBX|4|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|3|20070517|||||F|||20110108||||||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|3|20110108|||||F|||20110108||||||

OBX|9|CE|30956-7^VACCINE TYPE^LN|4|17^Hib, unspecified^CVX|||||F|||||||

OBX|7|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|4|20140204|||||F|||20110108||||||

OBX|8|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|4|20110108|||||F|||20110108||||||

OBX|9|CE|30956-7^VACCINE TYPE^LN|5|89^Polio, unspecified^CVX|||||F|||||||

OBX|10|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|5|20111108|||||F|||20110108||||||

OBX|11|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|5|20110108|||||F|||20110108||||||

The following Z23-ACK message is returned:

MSH|~\&|NCIR9.8.0|NCIR||TEST ORGANIZATION|20121217030558-
0500||ACK^V04^ACK|1|P|2.5.1|||NE|NE||||Z23^CDCPHINVS|NCIR|TEST ORGANIZATION

MSA|AA|1||||

BTS|1||

FTS|1|

Example Warning Message

MSH|~\&|NCIR9.8.0|NCIR||TEST ORGANIZATION|20121212100101-
0500||ACK^V04^ACK|1|P|2.5.1|||NE|NE||||Z23^CDCPHINVS|NCIR|TEST ORGANIZATION

MSA|AE|1

ERR||RXA^1^15^^|102^Data type error^HL70357^^|W||||Inventory - Empty Manufacture Id Detected|||||||

Example Reject Message

MSH|~\&|NCIR9.8.0|NCIR||TEST ORGANIZATION|20121212100101-
0500||ACK^V04^ACK|1|P|2.5.1|||NE|NE||||Z23^CDCPHINVS|NCIR|TEST ORGANIZATION

MSA|AR|1

ERR||PID^1^3|207^Application Internal Error^HL70357^^|E|207.22^InvalidName^HL70533|||Record Rejected -
Invalid first name (1SAKIE).|||||||

VERSION HISTORY

Version #	Implemented By	Revision Date	Reason
1.0	Dave Rider	02/05/2013	Initial creation document based on peer feedback by HPES and NCIR community.
8.9.0	Maia Onderkirk	08/26/2013	Release 8.9.0: Added new Flu VTN, CPT, CVX
8.9.1	Tawna	09/12/2013	Added disclaimer after title page and draft watermark.
	Tawna Chase	10/04/2013	Updated OBX section with funding code and eligibility information
	Sriram Venkataraman	10/23/2013	Review and updated throughout document.
	Tawna Chase	10/25/2013	Update based on state review. Correct reaction information and VTN information in appendix.
	Tawna Chase	11/7/2013	Update based on changes to QBP
8.9.2	Tawna Chase	01/17/2014	Update Appendix tables, Added sequence number to all PID-1 field, and updated error information for PD1-16
	Sriram Venkataraman	01/31/2014	Reviewed and updated multiple fields.
9.1.0	Sriram Venkataraman	03/01/2014	CVX, CPT, VTN and VGC review. Added comments for clarification.
	Maia Onderkirk	03/07/2014	Table 0292 values updated CPT values updated
	Maia Onderkirk	03/20/2014	Added table 0201 – Telecommunication use code Added table NIP001 – Immunization information source Added CDCPHINVS values – Immunization funding source
	Maia Onderkirk	05/01/2014	Updated current Appendix B to Appendix C Added Appendix B: Vaccine and Trade Name Listing
	Maia Onderkirk	06/03/2014	Updated current Appendix C to Appendix D Added Appendix C: Guidance on Vaccine Deferral
	Sriram Venkataraman	06/06/2014	Appendix tables and review/feedback of document
	Maia Onderkirk	06/10/2014	Accept changes and Finalize version Release 9.1.0
9.1.1	Maia Onderkirk	08/26/2014	Updated Table 0289 values to include FIPS County codes
	Sriram Venkataraman	08/27/2014	Review and feedback of changes for combo vaccine and changes to Client comments.
	Tawna Chase	09/08/2014	Updates made based on comments.
9.2.1	Maia Onderkirk	10/14/2014	Added Table 0292 CVX value 161 – Vaccine: Influenza, seasonal, IIV4, IM, pf, ped Updated CPT 90685 description: Influenza, seasonal, IIV4, IM, pf, ped Added VTN: Fluzone IIV4, FluLaval IIV4 Pres-Free, Fluzone IIV4 P-Free, Ped
9.2.2	Tawna Chase	10/23/2014	Remove suppressed warning messages Added OBX-17 value “VXC40” County updates to PID and NK1
	Sriram Venkataraman	11/04/2014	Included County of residence changes, PID-11 and PID-13 and review, corrections and feedback of complete document..
	Tawna Chase	11/04/2014	Added Name type HL70200 table Added Address type HL70190 table Added error messages.
9.3.0	Sriram Venkataraman	12/15/2014	9.2.2 was not released since it was decided to release along with 9.3.0. Clarified NK1-39 and reviewed throughout.
9.3.1	Tawna Chase	1/09/2015	Updated contra and reaction descriptions
	Lacey Dean	2/06/2015	Added Table 0292 CVX value 162 – Vaccine: Meningococcal B, recombinant; 164- Vaccine: Meningococcal B, unspecified formulation; 165 – Vaccine: HPV9 Added CPT 90621 description: Meningococcal B, recombinant; CPT 90651: Human Papillomavirus 9-valent Vaccine Added VTN: Gardasil 9, Trumenba

			Added VGC: MeningB
9.4.0	Maia Onderkirk	03/27/2015	Updated MSH-4 descriptions Updated OBX-4 descriptions Removed Email Address from examples Removed VGC values from the Appendix Added Appendix A HL7 table 0363
	Maia Onderkirk	04/06/2015	Added Table 0292 CVX value 163 – Vaccine: Meningococcal B, OMV Added CPT 90620 description: Meningococcal B, OMV Added VTN: BEXSERO
	Sriram Venkataraman	04/13/2015	Reviewed CDC feedback and made few minor updates.
	Maia Onderkirk	06/18/2015	Added VTN: QUADRACEL Added Immunity values: 38907003 (SCT), 33 (L), 44 (L)
9.5.0	Maia Onderkirk	08/27/2015	Added Table 0292 CVX value 166 – Vaccine: Influenza, Intradermal, IIV4, pres-free Added CPT 90630 description: Influenza, Intradermal, IIV4, pres-free Added VTN: Fluzone Intradermal IIV4 Pres-Free
9.6.0	Maia Onderkirk	05/12/2016	Added Package NDC list of NCIR values to Appendix A Added Unit NDC list of NCIR values to Appendix A Added Package and Unit values to Appendix B Updated Appendix B reference tables to list CVX+VTN and CVX+NDC values in separate tables Updated RXA-5 specifications to add NDC
9.6.2	Maia Onderkirk	08/02/2016	Added Table 0292 CVX value 167 – Vaccine: Meningococcal, unknown serogroup Added VTN: Vivotif Added Table 0227 MXV value PAX – Manufacturer PaxVax
9.7.1	Maia Onderkirk	12/21/2016	Added VTN: Afluria IIV4, Afluria IIV4 Pres-Free, Flucelvax IIV4 Pres-Free, Fludad IIV3 Pres-Free Added CVX/Vaccine: 171/Influenza, IIV4, IM, MDCK, pres-free, and 168/Influenza, trivalent, adjuvanted Updated NDC Reference tables for Inventory Deduct Updated Influenza Package and Use NDC for 2016-2017
9.8.0	Maia Onderkirk	03/31/2017	Updated version 9.8.0 with HL7 v2.5.1 changes
9.8.7	Maia Onderkirk	01/19/2018	Added VTN: Flublok RIV4 Pres-Free; SHINGRIX Added CVX/Vaccine: 185/Influenza, recombinant, IIV4, IM, p-free; 187/Zoster recombinant; 188/Zoster, unspecified formulation Updated NDC Reference tables for Inventory Deduct Updated Influenza Package and Use NDC for 2017-2018 Updated accepted contraindications/precations listing Updated PID-3 description to indicate SSN is not an acceptable client identifier.
10.0.0	Maia Onderkirk	03/02/2018	No change
10.1.0	Maia Onderkirk	06/20/2018	No change
10.2.0	Maia Onderkirk	09/07/2018	No change
10.3.0	Maia Onderkirk	09/19/2018	No change
10.3.1	Maia Onderkirk	10/30/2018	Added VTN: FLUCELVAX IIV4, HEPLISAV-B Added CVX/Vaccine: 186/Influenza, IIV4, IM, MDCK; 189/HepB-CpG Added CPT: 90756; 90739 Updated NDC Reference tables for Inventory Deduct Updated Influenza Package and Use NDC for 2018-2019